

# THE AUTOMOBILE

WEEKLY

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## AUTOMOBILE AT A BROADWAY FIRE.

**I**N a "double nine" fire alarm from lower Broadway a week ago an automobile figured among the vehicles bringing municipal officials to the scene. The fire broke out in a nest of old brick buildings,

engines, hose carts, and other fire fighting appliances were rushed to the spot from a score of stations and outdistancing the fastest came an official automobile of the street cleaning department carrying Mayor

The view was taken looking up Broadway, with the blazing buildings on the left and in the background can be seen the smoke of a fire engine in which the chimney blast is producing a volcano of smoke, red-hot



MAYOR McCLELLAN AND STREET CLEANING COMMISSIONER WOODBURY OF NEW YORK ATTENDING A SERIOUS FIRE IN OFFICIAL CAR.

occupied as city headquarters by some of the large express companies, and in the old and dried structures the flames burned quickly and fiercely, so that for a time a general conflagration was threatened. Fire

McClellan, Col. Woodbury, street cleaning commissioner, and his chief of staff, Capt. Gibson. A snap shot of the machine taken soon after its arrival at the fire is the subject of our front page illustration.

cinders and flames. In the tonneau, seated behind the department chauffeur and modestly out of view, sits Mayor McClellan. Beside him is Capt. Gibson, and standing on the sidewalk with his hand

resting on the car is Col. Woodbury

The scene was really a much more striking one than the unconcerned attitude of those in the view would suggest. To the left in the space of a rather narrow street the flames roared and leaped upward a hundred feet, while all around showers of sparks and fiery embers fell in a constant rain. The smoke, almost choking in its density, obscured the light of day and silhouetted the figures with a remarkable sharpness. Indeed, until the negative had been developed one could hardly imagine that a camera lens would give such a striking result in the most unfavorable conditions.

The usefulness of the automobile in the daily work of city officials is gradually coming to be recognized, and even now the New York fire department is examining various cars with a view to the permanent use of the automobile by the fire chiefs.

### THEATER-GOERS "SPECIAL."

#### Nashville Suburbanites Independent of Bad Railroad Service.

*Special Correspondence.*

NASHVILLE, March 26.—The automobile seems to have solved, for well-to-do rural people, the problem of getting to the theater. The railroads running into Nashville have never run theater trains, except on special occasions, and it has been impossible for people living out of town to see plays unless they came in early in the day and spent the night in the city. This year, however, many people living in nearby towns have come in to the theater in their motor cars and have, of course, been able to return the same night. W. J. Howard, of Columbia, Tenn., came in through a driving rain last week with a party to see Maxine Elliott in "Cousin Kate" and made the thirty miles each way with his Winton in fast time, in spite of the slippery roads.

THE EAR should be trained to know the meaning of the various sounds that an automobile makes when in operation. Unusual sounds are due to defective operation. In a steam vehicle, for instance the ear will soon get accustomed to note the working of the pump as soon as the bi-pass valve is closed. The pump makes a well-defined noise that cannot be mistaken, if everything is working properly, and if it cannot be heard the chances are that the water tank is empty or nearly so. Again, in driving a gasoline car, the sound of the exhaust forms a correct index to the working of the motor, and if one of the cylinders is "missing" the irregular exhaust warns the listening operator at once. If the exhaust is muffled so that it cannot be heard, other sounds will assert themselves, and the regular "buzz-buzz" of the coil vibrators will be welcome to the ear, denoting that the ignition is working properly.

## National Tour to the St. Louis Fair.

### Details of the Great Run in August Planned by the American Automobile Association—Social Features.

The history of recent tours in this country, all organized for the purpose of demonstrating the endurance of cars, has led the American Automobile Association to organize a pleasure tour this season. The efficiency and endurance of the automobile of today has been sufficiently shown, but it remains to demonstrate by this year's tour the possibilities and enjoyment of long distance tours and to show the public all that is good in the sport of automobilism.

The national tour to St. Louis is not in any sense of the word a contest. It is a pleasure trip for those who have the time and inclination to spend two or three weeks in automobilism. The route has been laid out in easy stages, averaging less than 100 miles a day, which distance under ordinary conditions is possible and comfortable for even the smallest of cars. There are two stops over Sunday, one at Buffalo and one at Chicago. The time of the year has been selected so as to afford the best possible weather and condition of road. The various routes afford the best facilities and roads, which although not entirely good, are the best possible at the present time.

It is a tremendous undertaking to organize a tour of this sort, but the American Automobile Association has every possible advantage for making the event a success. It must be remembered that the membership of this association is made up largely of clubs throughout the country, each one of which is taking upon itself the details of local accommodations, route directions and the like. With such a body of workers in all sections of the country, it is comparatively a simple matter to arrange all of the necessary details. The active interest which the clubs are taking in the tour will be of great benefit to the sport, and touring in particular, in their localities. In the matter of road improvement, for instance, much good will be accomplished. Automobilists in every section along the route are interesting themselves in trying to put their particular section of the road in the best possible shape for the run. The run itself will be the greatest demonstration for good roads that has ever been attempted in this country.

In order to carry the demonstration into every possible section of the country, routes have been laid out through all available sections instead of trying to make one big tour of it. For instance, the New England section will go across central New York State to Buffalo where the New York contingent will meet it, having come over the endurance run route through Binghamton. The Philadelphia-

Baltimore-Washington section will go through southern Pennsylvania to Pittsburgh and from there to Cleveland to meet the other two divisions, from which point the route is west to Chicago. Then another division will start from Columbus by way of Indianapolis and Terre Haute and will go direct to St. Louis. There will be several sections from the West, including one from St. Paul and Minneapolis which will meet the main run at Chicago. It is probable that another western section will come from Denver, through Kansas City to St. Louis direct. It will thus be seen that the greatest possible area is covered by these converging routes.

The touring committee of the American Automobile Association, composed of members in various sections of the country, will, of course, be most active in arranging the preliminary and final details. These details consist principally of laying out the routes and securing information regarding hotels and garages. The hotel question is easily the most difficult one to handle, and it may, at the last moment, be necessary to divide the run into sections going over the same route in order to get sufficient accommodations for the large number that participate in the run. A conservative estimate of the number of machines which will reach St. Louis is 500, and as the majority of these will be touring cars, carrying three and four passengers, it will be seen that something like 1,500 to 2,000 persons will be on the road at the same time. Such a crowd will tax to the utmost the hotel accommodations in almost any of the cities along the line, but it is believed that by getting not only a list of the hotels but also boarding houses, and even private houses that are willing to take guests for over night, the matter can be handled satisfactorily. In any event the greatest possible care will be exercised in providing for everybody, and in view of the fact that there are automobile clubs in almost every town where an over-night stop is made, it is believed that the entire matter can be handled satisfactorily.

A trail of confetti will be laid one day in advance of the run and, in addition, the route will be marked by signs both temporary and permanent. The committee is endeavoring to make the placing of signs a considerable feature of the advance arrangements and even if only a little is accomplished in this direction it will be one more thing to the credit of the tour.

In all probability each machine will carry a number as a means of identification for the public along the route. A list will, of course, be published in advance



and with numbers on the cars the interest of the people along the line will be much increased, as there will be many prominent automobilists whom they would like to be able to identify.

As a help toward defraying the expense of laying out the route and getting together hotel and garage information, a nominal charge of \$10 will be made for each entry. This is not in the nature of an entrance fee, but rather the payment for privileges which the tourist will receive. Inasmuch as this tour is purely a pleasure trip, there will be no rules or regulations whatever, and each tourist is at liberty to start when he likes and stop when he likes. There will be, however, a book of registration at the headquarters at each night's stop and if one desires, he can register in this book. To all of those who have registered at each night's stop, will be given a certificate at St. Louis, stating that the run was made by such tourist on schedule time. To the individual this certificate will be a pleasing souvenir of a long and pleasant tour and to the manufacturers, who doubtless will enter, will be of value as showing the possibilities of their cars for touring purposes.

An outline of the tour would be incomplete without mention of the entertainments which will be given to the tourists along the route. At almost every night stop, some form of entertainment is being planned by the local clubs and the social side of the tour will be most pronounced. The opportunity of getting together in the evening at a smoker or informal dinner and talking over with other tourists the events and experiences of the day, will be without doubt one of the most enjoyable features of the tour and one which is not offered to the tourist who takes a trip by himself. In all club runs whether short or long, this is one of the most attractive features and on a run of the magnitude of the St. Louis tour, it will play an important part.

St. Louis was selected by the association as the objective point of the tour because of the exposition there this summer. At that time it was not known to what an extent the fair authorities would recognize the undertaking, but it is learned that they have taken the matter up most enthusiastically and will do everything in their power to make the ending of the run a complete and enjoyable success. The tour ends in St. Louis on Wednesday night, August 10, and on the following day, which by rare good luck happens to be St. Louis Day, one of the most important days of the Fair, a grand parade will be held through St. Louis to the Fair grounds. The grounds will be thrown open to the tourists and they will parade all through the avenues to some point where the machines will be parked and left for the remainder of the week as a touring exhibit. The educational value of such an exhibit of, say, 500 touring cars with their complete equipment, will be of the greatest possible value, and it is only to be regretted that the

cars cannot be left there for a greater length of time.

Aside from the enjoyment which the tourists themselves will get from the run, there are many features about it which commend it. In the first place, it will demonstrate the ease and enjoyment of touring. Then also it will prove the quality and endurance of automobiles for tours of this sort. Perhaps the most important feature will be the good which it will do in the matter of road improvement. As incidental to this, it will also be turned to good advantage in the matter of road signs. Last but not least, the exhibition of the machines at the Fair will be of much value to the trade and sport in an educational way.

While, of course, the number of machines which will participate is more or less problematical, nevertheless 500, as stated previously, is really a conservative estimate. This does not mean that 500 machines will start from New York and go all the way through to St. Louis, but that the tour will end in St. Louis with at least 500 machines in line. Many of these will, of course, join the run at western points such as Cleveland and Chicago. During the whole trip, however, the number will be large, owing to many going short distances as a sort of escort. For instance, it is expected that 100 machines will leave Boston and go as far as Albany. Possibly fifty may drop out there but at that point others will join in. Of the 100 who left Boston, possibly fifty may go as far as Buffalo and perhaps one-half or more of those drop out there, so that out of the starters, perhaps only twenty or twenty-five will actually go through to St. Louis. As some drop out, however, others will fall in and in that way the size of the tour will be kept up all the way through to the end.

"Some excellent ideas are being advanced for the big tour to St. Louis," said Augustus Post, of the National Touring Committee of the American Automobile Association. Tuesday.

"Probably the most interesting suggestion is that automobilists be allowed to use the tow paths along the canal from Albany to Buffalo, in order to avoid some of the almost impassable roads thereabouts. An effort will be made to secure the use of about 100 miles of the paths.

"I received word from Colonel Culp, secretary of the Committee of Ceremonies at St. Louis, who says that the Mayor is well pleased at the proposal to have the motorists arrive in time for St. Louis Day, and he will have their arrival included in the regular events of that banner occasion.

"I might say that George Waite has been appointed a member of the National Touring Committee from the Cleveland Automobile Club and he will look after our affairs in that locality.

"Although nothing definite is known, I have heard from Mr. C. J. Glidden that S. F. Edge, the English racing motorist, will come to America to participate in the St. Louis tour with a Napier car.

"From Frank X. Mudd of Chicago I learn that a freight rate has been granted at \$30 per car from St. Louis to points East, for those who desire to ship their machines by rail after reaching St. Louis. We are not satisfied with this rate, however, and will try to get the regular exhibition rate.

"Louis R. Smith has suggested the advisability of having the railroads furnish sleeping and dining cars for tourists at various night stops, where the hotel accommodations may be insufficient and this idea may have to be put into operation. The hotel question is undoubtedly the all-important one of the trip."

### ST. LOUIS RUN LICENSES.

#### State and Local Laws to Be Complied with on the Journey.

Participants in the A. A. A. tour to the World's Fair in St. Louis next summer, may have to be provided with a number of State licenses and carry several sets of license numbers to be attached to their cars. Tourists from Connecticut, for instance, will require in addition to their regular Connecticut license and license tag, similar State privileges, and visible evidences thereof, to pass through New York, Pennsylvania, and Missouri. Besides these State licenses, they will need city licenses in Cleveland and Toledo and in a number of the lesser towns of Ohio, Indiana and Illinois, unless the American Automobile Association can induce the authorities to grant a suspension of the ordinances as a special privilege.

The association officials in charge of the tour arrangements are understood to be diligently working out this important problem in order to relieve all the participants from uncertainty and annoyance; probably some means for securing all necessary licenses and tags for the entire trip from each section of the country, through the A. A. A. will be found. The necessary information regarding legal speed restrictions in different States and cities will very likely be printed in convenient form by the A. A. A. for the tourists to carry in their pockets, together with the itinerary of the trip and other useful information.

A summary of New York State's new automobile law is contained in this issue of THE AUTOMOBILE. The Massachusetts and Pennsylvania laws will remain as at present. Several bills to regulate the use of automobiles and requiring licenses and tags are now in the Ohio legislature and one of them will no doubt be passed and in force before the start of the tour. Indiana has no State law, but some of the cities and towns have individual ordinances.

Illinois has a State speed law but it does not require a State license, and the Chicago registration ordinance over which there has been such a long legal fight, has been declared unconstitutional, and will presumably not be enforced. Other Illinois towns, taking their cue from the Western metropolis, will, it is reasonable to expect, not enforce licensing ordinances during the few hours that the tourists are passing through. It is very likely that, as a matter of courtesy, all the cities and towns on the various routes will grant a suspension of the ordinances for the occasion.

One of the most stringent State laws is that of Missouri, passed in March, 1903, which requires that the driver of an automobile shall, when required by the driver or person in charge of any horse-drawn vehicle, give the right of way, "and shall not run such automobile at a greater rate of speed than nine miles per hour." When approaching a vehicle drawn by animals, especially if driven by a woman or child, the motorist must "stop such automobile for such a time as to enable such vehicle to pass, and if going in the same direction shall, before attempting to pass, give said driver sufficient notice by the sounding of a bell or whistle, and, if necessary to prevent the fright of such animal or animals bring said automobile to a stop in order to give such driver an opportunity to alight from such vehicle, carriage or wagon."

The minimum penalty for violation of any of the several provisions of the law is a fine of \$100 or thirty days in jail, and the maximum penalty is \$1,000 fine or six months in jail, or both.

#### MEANING OF "MILES AN HOUR."

The city and county attorney of San Francisco was recently called upon to decide whether the words "speed, on the level, twenty miles an hour" (which was one of the qualifications that the electric automobile used by the chief of the San Francisco fire department was guaranteed to possess), should be interpreted legally to mean that the vehicle must maintain that rate for one hour or that it must develop that rate of speed for one mile, to fulfill the conditions of purchase. In his opinion rendered to the Board of Fire Commissioners he held that the words should be taken in their ordinary and usual sense, and mean that the machine should maintain an average rate of speed of twenty miles an hour for one hour at least.

NUMEROUS projects are under way for a motordrome near Paris, but the one most likely to be accepted is for the Bagatelle inner park of the Bois de Boulogne. The main outlines of the proposal are a lease of the ground by the Societe Paris-Automobile, and to enclose the same with hedges, but leave it open as a public pleasure ground except on race days. It is also to be a starting point for the ascent of the Aero Club.

## Commercial Traveling by Automobile.

### Experiences of a Traveling Salesman on a 1,200-Mile Trip from Chicago to Kansas City—Practical Utility of the Power Vehicle in This Field.

*Special Correspondence.*

KANSAS CITY, March 26.—Traveling salesmen in the Middle West are beginning to appreciate the advantages of the automobile in their business, finding that it not only makes them independent of trains and timetables, but by its novelty proves a good advertising feature. When they drive up to a merchant's door in a modern gasoline touring car or even in a medium weight road machine the moral effect has a real commercial value, elevating the visitor to a considerable eminence in the estimation of his customer, who at the same time is to no small extent susceptible to the

an automobile, and also to those who are planning long tours through the Mississippi Valley country.

#### STUDIED HIS CAR IN THE REPAIR SHOP.

In order to fortify himself against mishaps Mr. Spielman spent two weeks in the Chicago garage where his make of car was handled. He put on overalls and jumper and went to work in the repair shop with the other workmen, doing whatever repair jobs came to him in the regular routine. At the end of this period he felt that he was fully competent to operate the car and to



MR. AND MRS. SPIELMAN ARRIVING IN HANNIBAL, MO., IN A SNOW STORM.

subtle flattery of the distinction of having a motor car halted before his store, where a crowd of townspeople invariably gathers to inspect the machine.

One of the most thorough trials of the new mode of commercial traveling was made last summer and fall by F. A. Spielman, a traveling salesman, who for nearly four months used his Auto-car tonneau to "make" his towns on a trip from Chicago to Kansas City, instead of depending on railroad trains and horse-drawn conveyances. The experiment was purely a business proposition undertaken by a business man with the sole object of getting monetary results. No consideration of pleasure or sentiment entered into it. The details of Mr. Spielman's trip should therefore prove of interest and value to any one else who is considering making a similar use of

effect such temporary repairs as might be needed on the road. Thus he had the decided advantage before starting on his trip of a thorough knowledge of his machine, which is of prime importance in the West, where repair shops are far apart and men capable of making repairs to an automobile are scarce. As to driving over the country roads, Mr. Spielman had no misgivings, as he was fond of touring and had toured 4,000 miles awheel in Europe in 1901.

#### COURSE OF THE 1,200-MILE TRIP.

Accompanied by Mrs. Spielman and with his sample cases stowed away in the tonneau, Mr. Spielman left Chicago on September 6. He traversed Illinois and the southeast corner of Iowa and then followed a circuitous route in the northern part of Missouri, ending at Kansas City.

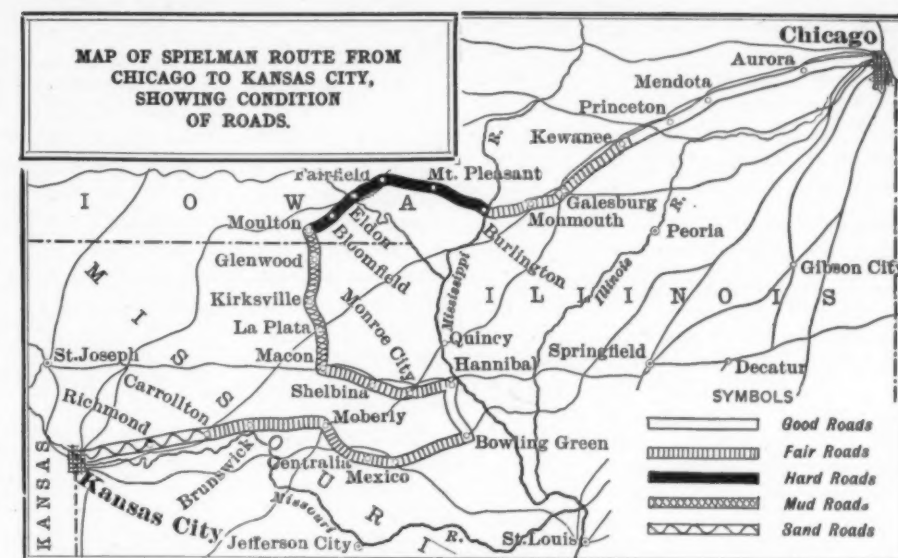


The accompanying map shows the course and indicates the condition of the roads, which are at their best in the fall. Anyone covering the same route might expect to meet similar conditions unless the season was particularly rainy. The roads through northeastern Illinois were good and long runs were made each day, but in the western part of the State they were only fair. After the Mississippi River was crossed they became heavy. The worst part of the trip was through northern Missouri, where mud, in spite of the advanced season, stalled the car on several occasions. Long crosscuts through cornfields had to be taken more than once, a section of the rail fences being taken down to permit the passage of the car. At one place, near Glenwood, a meadow was used as road for nearly a mile. Occasionally rails were borrowed from the fences to make a mud hole passable.

#### MUD AND SMALLPOX.

It was while approaching Kirksville at a good clip at about 6 o'clock one evening that a long stretch of mud confronted the travelers. To go around it was impossible, so he decided to take it at full speed, if it could be done. He was alone on this part of the trip. He started his machine at its highest speed and traversed perhaps a hundred yards of the slough. Then the machine stopped. Power would not advance it another inch. The wheels sank out of sight above the hubs. It was five miles to town, but it might as well have been a hundred. Mr. Spielman took one of the lamps from the front of the machine and fastened it to the tonneau to warn possible late comers. Then he threw his tarpaulin over the car and started out for a farmhouse whose lights he saw half a mile away. After wading through mud almost kneedeep he finally reached his destination.

"Certainly," said the woman who answered his knock, when he asked whether she had a bed which he might use for the night. "It's all clean and nice. Some of the children had the smallpox a few weeks ago, but I fumigated everything myself and it's all right now."



Courageously taking the chance, the motorist slept, though fitfully, and at day-break he hired a farmer with a team of mules to drag the machine from the mud, and continued on his journey.

#### TEMPTED TO LOSE AMATEUR STANDING.

At Monroe City, Mo., Mr. Spielman was tempted to lose his standing as an amateur. He was offered ten cents to become a professional, and now he says he is sorry he did not take the money. Just after he had seated himself and was ready to start from the town, a lanky native who had been watching him in the van of nearly all the able-bodied inhabitants of the town, stepped out close to the machine and said: "Mister, we ain't never seed none of them machines afore. We'd be right smart obliged if you was to give weuns an exhibition."

"I'm afraid I haven't time," answered the traveler, who had a long trip ahead of him that day.

"O, yes," persisted the native, "just run forwards and backwards and turn around. That will be all right."

"Can't do it," retorted Spielman.

"Well," whispered the man, as he leaned over the wheels to be confidential, "if you give an exhibition, I'll give you a dime.

Hones' I will." And he produced the dime.

It was the hardest task of his life for Spielman to keep from laughing, as the man was really serious. Finally he said:

"I can't take your money. You see, I'm an amateur, and if I was to take money I would lose my standing. I can't afford to take the risk. Now, I'll give the exhibition. Look out." And he threw in the clutch and left the town behind. He says he will go back sometime and get that ten cents, if he has to earn it.

Near Hannibal, Mo., a short time later, Mr. Spielman ran into the first blizzard of the season. One of the accompanying photographs, taken just after the snowfall, shows how he and his wife were prepared for it. Through more sand and mud he made his way into Kansas City, with a record of more than 1,200 miles to his credit.

#### "SCOOT-WAGON" RIDES INDUCED SALES.

This trip between towns, as shown on the map, was not all the distance covered by the traveler. No record was kept of the many side trips to smaller towns and villages off the direct route, nor of the rides given to customers, both actual and prospective, in the "scoot-wagon," the name applied to his car in localities where auto-



A COUNTRY HOTEL IN THE MIDDLE WEST.



PICNIC OF COUNTRY FOLK ON-OUTSKIRTS OF MISSOURI TOWN.

mobiles had never before been seen, or where they were, at any rate, comparatively rare. The practice of giving short rides to customers that were hard to "land" or from whom big orders were particularly desired proved very effective in most cases.

#### INVALUABLE TO COMMERCIAL TRAVELERS.

After his four months' experience last year, Mr. Spielman says that he considers the automobile almost invaluable for those commercial travelers who can cover their territory in a week, seeing their regular customers and returning each Saturday to spend their Sundays with their families. Such men cannot only make their points quicker, he says, but they can avoid many of the vexatious delays due to delayed trains and the other drawbacks commonly encountered. Six days' work by the old traveling means can easily be done in half that time in an automobile, he says, and with more enjoyment.

His trip from Chicago to Kansas City was nearly free from delays. Six spark plugs constituted the bill for repairs. In no case was there a delay of more than forty-five minutes. A fair quality of gasoline was found along the entire route. After reaching Kansas City, Mr. Spielman exhibited his car at the convention of implement dealers, then in session, and sent more than one of the dealers home with the determination to have cars of their own.

Everyone who drives a car, however well he may know it, sometimes forgets. Mr. Spielman forgot once, when four miles from the nearest town. It might be better to say that he remembered, for his gasoline gave out with a suddenness that startled him; and the trip to town for a fresh supply has helped him to remember ever since.

A very unusual accident happened near Shelby, Mo. Something was the matter with his carbureter and on examining it he found a large grasshopper, which had in

some manner got into it and which was enjoying a gasoline "jag."

#### FARMERS NEED OBJECT LESSONS.

As to mud, Mr. Spielman thinks the farmers have lived in it so long that they take it as a matter of course and pay no particular attention to it. They need an object lesson, in the form of short stretches of really good roadbed, to convert them. Once the example is set, they will want good roads as much as anybody.

Of the 1,200 miles traversed, Mr. Spielman drove 800 miles without having to pump up the tires. He had no actual breakdowns.

Next month he will start on a trip to the Louisiana Purchase Exposition at St. Louis, making a number of side trips and arriving at the fair in May. He will remain through the summer at the Exposition, where he will have charge of the exhibit of the stove company for which he travels. After that he will adopt the automobile to the exclusion of trains—at least, such is the idea his long trip has fixed in his mind.

#### WASHINGTON COMPANY BUYS GARAGE

##### *Special Correspondence.*

WASHINGTON, March 28.—The National Capital Automobile Co. has just secured the fine garage now under construction on Fourteenth Street above R Street, which was originally planned for the Mutual Automobile Storage Co. The purchase price was \$36,000. The building, which is of fireproof construction throughout, is nearing completion, and it is expected that it will be ready for occupancy by May 1. It has a frontage of 50 feet and extends back 156 feet. It will be two stories in height and will have reception rooms, separate lockers, and many other conveniences.

The company has just arranged for the Washington agency for the Racine line of automobile boats, and is the first automobile concern here to take up launches.

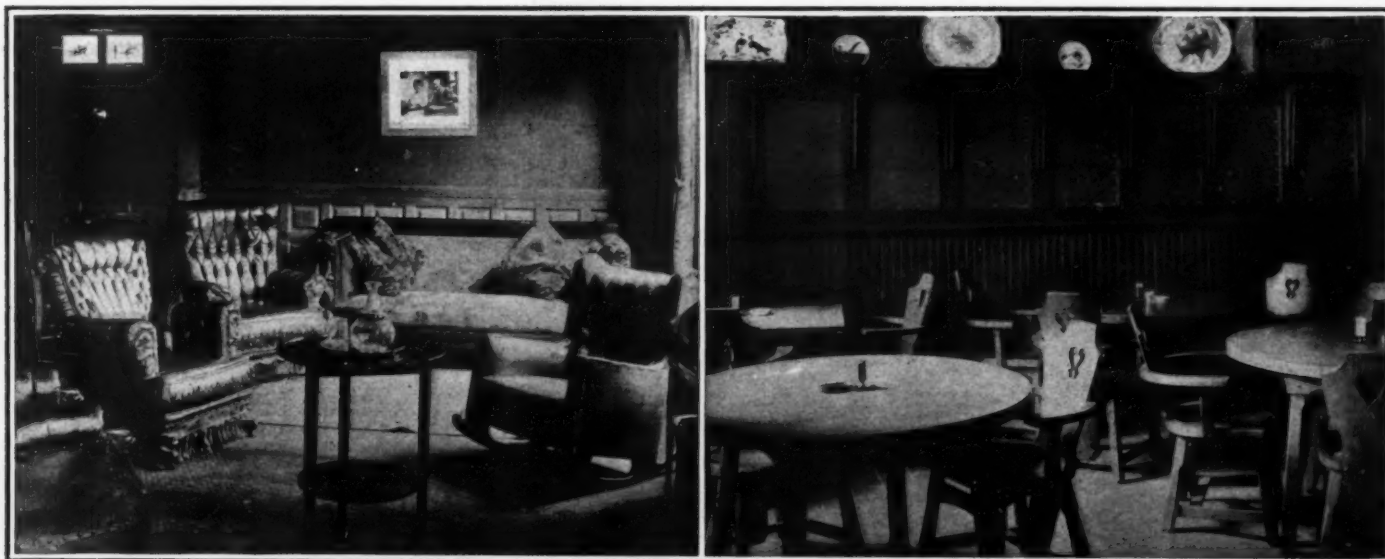
#### CLEVELAND CLUB ROOMS.

##### **Automobilists Occupy Their New Quarters in the Hollenden Hotel.**

##### *Special Correspondence.*

CLEVELAND, March 28.—A smoker and stein party was held by the Cleveland Automobile Club at its new club rooms in the Hollenden Hotel last Saturday night. Each member was requested to bring with him a stein to be used in ornamenting the rooms and for the use of the members. Forty-six steins were thus collected, ranging in capacity from a pint and a half to four pints and a half, the largest being contributed by George Collister. Toasts were responded to by various members and the occasion was thoroughly enjoyed.

The new club rooms are proving a great success, and the membership has been growing rapidly since they were fitted up. The club considered for a long time the advisability of fitting up a clubhouse or a suite of rooms in the downtown portion of the city, but it was decided that the organization was not sufficiently large to warrant an expensive outlay at this time, and arrangements were made with the Hollenden Hotel for the use of a large room adjoining the grill room which had been fitted up recently in that hostelry. The hotel furnished the adjoining room elaborately and placed an attendant in charge. The members patronized the public grill room for a time but lately a desire was felt for a private refreshment and smoking room where the members could be by themselves, and another room adjoining the club room was provided. This has been fitted up in "rathskeller" style and lunches and refreshments are now served at all hours. A large number of the members now take their noonday lunches at the club rooms, and as a result the social feature of the organization is now thriving in a way that was impossible heretofore.



SMOKING AND GRILL ROOMS FITTED UP FOR THE EXCLUSIVE USE OF MEMBERS OF THE CLEVELAND AUTOMOBILE CLUB.



## Electric Commercial Vehicles.

### Hauling Capacity, Battery Life and Costs Per Annum—Tire Costs and Maintenance—Charging Current and General Repairs—Analysis Showing Total Costs Per Ton Mile.

By HIRAM PERCY MAXIM.  
(Continued from page 347.)

IN A 2,000-pound capacity wagon for general service a 13-plate MV size Exide Express battery is a generous one, and since this represents disadvantageous conditions on the score of first cost, and is therefore conservative, it has been taken as the basis for these figures. The price of such a wagon, with the usual type of department store body, runs about \$2,500, today. In ordinary service, and under the care taking conditions existing in the general run of cars, a battery such as has been selected averages somewhere in the vicinity of ninety-five days' work before the sheddings of active material, or "mud," as it is called, have accumulated to a point requiring removal. This removal is called its first cleaning.

#### CLEANING THE BATTERY.

A cleaning consists of cutting each connecting strap so that individual cells may be separated, and the plates and separators as a unit removed from their rubber jars. When these are removed the jar is also removed and the mud washed out of it. Water from a hose is squirted generously over the element, and down between the plates to remove all active material that may be lodged between the plates, and also to clear away all loosened active material from the plates themselves. This is done to each cell. They are then reconnected to each other, or burned as it is called, and after filling with acid and given a long slow charge are again ready for service.

After this cleaning they seem to run for somewhere about seventy-five days more before the mud has again accumulated to a point requiring another cleaning. This time the wooden separators have usually become defective by the acid to a degree which makes it necessary to remove them and to substitute new ones. This requires the separating of the element when it is removed from its jar, and means more labor and a greater breakage of rubber separators and plates than at the first cleaning. It also means the cost of the new wooden separators, and the longer so-called "soaking" after the battery has been reassembled again.

When this has been done and the battery goes into service for the third time, it seems to be good for something in the vicinity of sixty more days' work before all of the active material on the positive plates has been shed and their useful life ended. When this point is reached a new set of positives is substituted for the old set, and since this means the handling of the fra-

• A paper read before the Automobile Club of America in New York.

gile acid soaked wood separators, these also must be substituted by new ones. This adds another element of rubber jar and separator breakage, a result principally of carelessness, but which evidently cannot be controlled since it is universal.

#### NEW PLATES AND SEPARATORS.

When the new positive plates and the new wood separators have been installed, the battery starts out again entirely fresh, except for the negative plates. In most cases these seem to hold their own, and to show no signs of failure until the next first cleaning. Furthermore, they do not appear to all fail together, as do the positives. At each cleaning it is apparent which are the ones likely to go soon, and the opportunity is taken at these times to remove them and substitute new ones. The death of the negative seems to be in the ordinary service we are considering, a gradual breaking away of the actual material from its support, and a general disintegration of the entire plate. An average fully as bad as seems fair to take would appear to be one set of negative plates for every 1.67 sets of positive plates.

This, briefly, represents the detail of existing battery repairs. It amounts to a continual maintenance account, since the battery would be under this arrangement permanently in good running order. As already stated, the conditions named are average, and hence should be conservative. Taking now a full year's work, the cost per annum for such a battery performance as this amounts to the following:

#### BATTERY COST PER ANNUM.

New positive plates.....	\$155.00
New negative plates.....	84.00
New wood separators.....	26.10
Rubber separators broken in handling.....	4.55
Rubber jars broken in service and handling.....	21.70
Total labor in connection with battery.....	65.00
Supplies, and all other expenses..	48.50
Total per annum for battery repairs	\$404.85

The wagon during this time has averaged about 30 miles per day. During the year there seems to be about 288 full working days for such a wagon. This means 8,640 miles for the year, which brings the battery maintenance expense to 4.68 cents per vehicle mile. This amounts to \$1.40 per day.

#### COST OF THE TIRES.

The next item of maintenance expense is that of rubber tires. As in the case of batteries, a wagon on which the tires have

been scrimped, and which are therefore working toward their limit all the time, wear out more rapidly than tires of more generous proportions. In a 2,000-pound capacity wagon, a 3 1-2-inch tire is a generous one, and since this also works disadvantageously on the score of first cost, and in consequence is conservative, it has been taken as the basis for these figures.

The price of a set of 3 1-2-inch by 36-inch diameter solid rubber tires, allowing something for scrap salvage, is about \$188.00. In New York City, such tires can be depended upon for about 9,000 miles service. On the basis of 8,640 miles per year, the cost per annum becomes for rubber tire maintenance, about \$180.00. This is 2.09 cents per vehicle mile, or 62.7 cents per day.

#### COST OF CHARGING CURRENT.

The next item is cost of power or charging current. A good figure seems to be something in the vicinity of 14.2 kilowatt hours per charge per day per vehicle. In many cases this charging current is taken from the regular lighting plant with which the stable or store is equipped. Where this is done the cost per kilowatt is very low, being never above 2 cents. When the current is purchased from the street mains, however, it amounts usually to something nearer 4 cents. A uniform figure of 3 cents has been taken for the purpose of discussion. Upon the basis of 288 working days per year and 14.2 kilowatt hours per day, the total power consumption for the year is 4,090 kilowatt hours, or 5,480 horsepower hours. At 3 cents per kilowatt hour, this comes out at \$122.70 per annum, which is 1.42 cents per vehicle mile.

#### ITEM OF GENERAL REPAIRS.

The next item is general repairs. As stated, this includes repairs of every nature other than those upon batteries and tires. It includes street collisions, side slewing repairs, and those resulting from the minor accidents unavoidable in service. Widely varying figures have, of course, been encountered in this also. An average has been taken and a constant arrived at which bears a relation to the price of the wagon—batteries and tires left out. This constant is about 4 per cent. and is convenient to arrive at the general repair expense of any vehicle, the service of which is about average, and the data of which is not obtainable.

In the modern types of wagons, having a 13-plate battery, 3 1-2-inch tires, and a selling price of \$2,500, the price less batteries and tires, is, allowing for cells only in the case of the battery, \$1,827. Four per cent. of this is \$73.10 which is taken as an average for general repairs per annum for this size wagon.

The next item is depreciation. An arbitrary figure of 10 per cent. has been taken on the price of the vehicle less batteries and tires. It is applied uniformly to all vehicles considered, and since the principal purpose of this discussion is the relationship of the different expenses, it is fair. The batteries

and tires being constantly maintained, they must, of course, be excluded from depreciation. Ten per cent. of \$1,827, makes the depreciation charge \$182.70 per annum, which is 2.12 cents per vehicle mile.

#### INTEREST ON THE INVESTMENT.

The last item taken is interest on investment. It is here that generous battery and tire allowances have their effect and serve to make the figures high, and therefore conservative. Five per cent. is taken on the \$2,500 price which is \$125 per annum or 1.45 cents per vehicle mile.

The totals may now be taken. They stand as follows:

Battery maintenance.....	\$404.85
Tire maintenance.....	180.00
Cost of charging current.....	122.70
General repairs.....	73.10
Depreciation.....	182.70
Interest on Investment.....	125.00
Total.....	\$1,088.35

Or 12.61 cents per vehicle mile.

It is interesting to note that this amounts to \$3.78 per day, or, if 250 packages per day are delivered, it is 1.51 cents per package.

#### CONSIDERATION OF HEAVY WAGONS.

Before analyzing these expenses, let us look at wagons of a greater load capacity also.

The two heavy wagons which have been selected for this discussion are the 3-ton and the 5-ton trucks. The data concerning these are found in practice to be even more difficult to average than that of the small wagons. The less number of vehicles used and the greater variety of the service, is the reason. The best that can be done in the way of an average figure is about as follows:

**Battery maintenance:** A generous battery for a hard working 3-ton truck is from 40 to 44 cells of 17-plate MV Exide Express. For the same reason that a 13-plate battery is taken in the case of the 2,000-pound wagon, this 17-plate battery is taken as the basis for this 6,000-pound wagon. This battery does a full day's work on one charge with a good factor of safety. The number of days' work it performs, before its cleanings, should therefore be the same as the battery in the smaller wagon. This seems to be the case, and brings the total life and number of days' work at about the same figure.

The battery details per annum work out somewhere about the following:

New positive plates.....	\$217.00
New negative plates.....	117.50
New wood separators.....	36.60
Rubber separators broken in handling.....	6.37
Rubber jars broken in service and in handling.....	32.80
Total labor in connection with battery.....	92.50
Supplies and all other expenses..	67.80
Total.....	\$570.57

The average day's work for a 6,000-pound truck seems to run somewhere about 24 miles. The number of working days per year may be taken as averaging about the same as in the case of the smaller wagon, or 288. This brings the mileage for the year to 6,912, or approximately 7,000. The cost per vehicle mile for the battery maintenance, works out from this at 8.25 cents. The average load in a 3-ton truck all day long seems to be somewhere in the neighborhood of 2 tons in ordinary service. The yearly ton-miles is therefore 13,824, which brings the battery maintenance out at 4.12 cents per ton-mile.

#### COST OF TIRE MAINTENANCE, ETC.

**Tire maintenance:** A generous rubber tire for a 3-ton truck is a 5-inch. Replacing a 5-inch tire on both front and rear wheels costs about \$350 for tires. The life in average service is something in the vicinity of 8,000 miles. The yearly mileage being 6,912 for the vehicle, the cost per annum for tires works out at about \$303 which brings the vehicle mile to 4.37 cents, and the ton mile to 2.18 cents.

The next is charging current: As near as can be averaged a day's charge for a 3-ton truck is something like 20.5 kilowatt hours. This brings the power for the year to 5,904 kilowatt hours. At the rate selected, 3 cents per kilowatt hour, the cost per annum for charging current works out at \$177.12, which is 2.57 cents for the vehicle mile and 1.29 cents for the ton mile.

The next is general repairs: Taking the 4 per cent figure which is about as fair for this truck as for the smaller one, it is applied to the truck price—less tires and battery. The price of a complete 3-ton electric truck averages today around \$3,700. Batteries and tires taken out leaves \$2,672. Applying the 4 per cent. brings the per annum charge for general repairs to \$106.88, which for the vehicle mile is 1.54 cents, and for the ton mile .77 cent.

The next item is depreciation: 10 per cent. on the price, less batteries and tires, becomes \$267.20 per annum, which is 3.86 cents per vehicle mile and 1.93 cents per ton mile, quite an important item. In the case of the interest on investment, 5 per cent. on the price of the vehicle brings the per annum charge at \$185, which is 2.67 cents per vehicle mile and 1.39 cents per ton mile.

#### TOTAL COSTS OF 3-TON TRUCK.

The total of these 3-ton figures, then, is something as follows:

Battery maintenance.....	\$570.57
Tire maintenance.....	303.00
Cost of charging current.....	177.12
General repairs.....	106.88
Depreciation.....	267.20
Interest.....	185.00
Total.....	\$1,609.77

or 23.2 cents per vehicle mile, or 11.6 cents for every ton mile, or \$5.57 per day, which

is a good figure from which to make comparisons.

#### FIVE-TON OR LARGEST TRUCK.

The 5-ton truck is now left. This is the largest of all the electric automobiles which have been produced. In it a great many new difficulties are met with, which do not appear in the smaller and lighter wagons. The cause is the much greater weight. The weight of a 5-ton truck with its load is something of considerable magnitude when it comes to steering and driving it in ordinary street traffic. Physical exertion on the part of the driver, and no little skill are needed for the steering alone. All of these things put together, have caused more complaint to be made in the case of this vehicle than in any of the others, and more misunderstanding and error surround it also. Unquestionably, the principal cause for this has been that the majority of 5-ton trucks which have been placed in service have had inadequate batteries, tires, and motor. In neither of the other vehicles discussed does scrimping of these important elements have such serious effect. An endeavor has been made to confine the figures given here to those vehicles which have generous tire, motor, and battery proportions.

A generous battery for a 5-ton truck is 44 cells of 19-plate MV Exide Express. Such a battery is usually able to manage a full day's work on one charge, and as such requires cleanings on about the same basis as the other vehicles which have but one charging per day. The battery maintenance expense per annum on this basis may be taken as something about as follows:

New positive plates.....	\$244.00
New negative plates.....	132.00
New wood separators.....	41.00
Rubber separators broken in handling.....	7.15
Rubber jars broken in service and in handling.....	35.00
Total labor in connection with battery.....	102.00
Supplies and all other expenses..	75.00
Total.....	\$636.15

An average day's work for a 5-ton truck seems to be about 20 miles. The number of working days per year, as in the case of the other wagons, may be taken as about 288. This brings the mileage run in one year to 5,760, making the battery maintenance 11.05 cents per vehicle mile, and 3.16 cents per ton mile, since the average load of a 5-ton truck all day long seems to be something about 3 1-2 tons. It is interesting to see that this means the total accomplishment in a year of 20,160 ton miles.

#### TIRES FOR FIVE-TON TRUCK.

In the case of the tires, a generous rubber tire for a 5-ton truck is 7-inch on the rear driving wheels, and 6-inch on the front wheels. These have been found to give very satisfactory results even in the severe service of the 5-ton truck, and it may be mentioned here, that this service is extraor-



dinarily severe, as compared with that of smaller vehicles on account of 5-ton trucks being principally used in down-town districts where the pavements are very bad.

These tires cost somewhere about \$464 per set. Their life in average service is something in the vicinity of 7,680 miles, as near as an average figure can be taken. The yearly mileage being 5,760 the cost per annum for tire maintenance works out at \$348, or 6.05 cents for every mile run, and 1.72 cents for every ton hauled a mile.

#### CHARGING CURRENT COSTS.

The charging current for a day's charge is something like 21.6 kilowatt hours on an average. This is 6,220 kilowatt hours, which, at 3 cents, brings the annual charge to \$186.60. This means 3.24 cents for power for every mile run, and .92 cent for every ton hauled a mile.

On the score of general repairs, the 4 per cent. figure holds as well as on the smaller vehicles. The price of a complete 5-ton truck today approximates \$4,000. Batteries and tires taken out leave \$2,785. This amounts to \$111.40 per annum, or 1.93 cents per mile run, or .54 cent per ton mile.

In the case of depreciation, the 10 per cent. constant amounts to an annual charge of \$278.50, or 4.84 cents per mile run, or 1.38 cents per ton mile.

The interest in the 5 per cent. figure is no less than \$200.00 per annum, which is 3.46 cents per vehicle mile, and .99 cent per ton mile. These totaled, appear as follows:

Battery maintenance.....	\$636.15
Tire maintenance.....	348 00
Cost of charging current.....	186.60
General repairs.....	111.40

### Rotary Gas Engine.

The model of a rotary gasoline engine, devised by Otto Konigslow, of Cleveland, Ohio, and exhibited at the automobile show in that city during the first week of March, possesses features of considerable interest.

The stationary part of the engine is a cylindrical casting 8 inches in diameter and 4 1-2 inches wide, outside dimensions. Immediately above and integral with this, as seen from left to right in the engraving, are the admission, compression and exhaust chambers. Valveless ports lead from the admission and exhaust chambers to the cylinder. A valve connects the admission and compression chambers, and another the compression and exhaust chambers. The main admission and exhaust valves may be seen at the top of the casting, on the left and right respectively. The operating devices for the valves, also shown at the top, are controlled by cams on a time shaft geared to the main shaft by a chain and sprockets, its time of revolution being one-third that of the main shaft.

The rotary part consists of a cylindrical casting, mounted on a shaft and set eccentrically with respect to the stationary

Depreciation.....	278.50
Interest.....	200.00
Total.....	\$1,760.65

or 30.57 cents for every mile run with an average load on board, or 8.74 cents for every ton which is hauled a mile. It is interesting to note that this totals \$6.11 per day.

#### COMPARATIVE COSTS OF WAGONS.

Now for some convenient way to get a comparative judgment of these different figures. In order that they may all be seen at once, they have been tabulated as shown in Table No. 1.

TABLE NO. 1.

RELATION BETWEEN ELEMENTS OF COST OF MAINTENANCE OF EXISTING ELECTRIC VEHICLES.

Elements	1-ton wagon		3-ton wagon		5-ton wagon	
	Veh. miles	Per cent.	Veh. miles	Per cent.	Veh. miles	Per cent.
Battery.....	4.68	37.0	8.25	35.4	11.05	35.5
Tires.....	2.09	16.6	4.37	18.8	6.05	20.0
Depreciation.....	2.12	16.8	3.86	16.6	4.84	16.0
Interest.....	1.45	11.5	2.67	11.5	3.46	11.4
Chg. Current.....	1.42	11.4	2.57	11.0	3.24	10.7
Repairs.....	.85	6.7	1.54	6.7	1.93	6.4
Totals..	12.61c.		23.26c. per veh. mile.		30.57c. per veh. mile.	
			11.63c. per ton mile.		8.74c. per ton mile.	
			\$3.78 per day.		\$5.58 per day.	
					\$6.11 per day.	

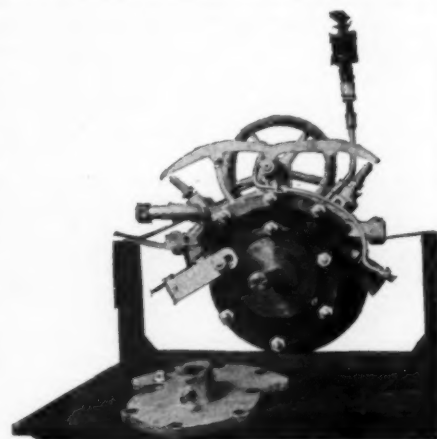
From this table we are able to see that a general average of the majority of the vehicles of up-to-date proportions in actual service today have six important items in their operating expenses which amount to a considerable sum of money. This brings us unavoidably to a comparison with the corresponding costs when horse-power is used.

(To be Continued.)

ing the next revolution, which corresponds with the one first described, the exploded charge is forced in front of the blade out through the exhaust valve to the air, a fresh charge being drawn in behind the blade at the same time for a new cycle of operations.

The speed is controlled by varying the amount of charge and changing the time of ignition. At a speed of 1,600 revolutions per minute, there is so little vibration that holding-down bolts are unnecessary. This feature, together with its compactness, are the two qualities which recommend it most strongly for automobile service.

Although it is not always possible to draw definite conclusions from the behavior



ROTARY GASOLINE EXPLOSION ENGINE.

of a small model operating under the best of conditions, as to what a machine of similar design but of commercial size will do in practice, it can be predicted with almost absolute certainty that difficulty will be experienced in finding a material for the spring used to hold the revolving blade in position that will withstand the high temperature of a combustion engine without losing its elasticity to such an extent as to become practically useless. This and other questions relative to the matter will shortly be settled, as Mr. Konigslow is making preparations to build a machine of 10-horsepower, to be installed on an automobile. Provision is to be made to cool this engine by means of water circulation; this, as is evident from an inspection of the engraving is not done in the model.

#### MRS. GOULD'S DRIVER FINED.

##### Special Correspondence.

LOS ANGELES, March 23.—Recently Mrs. George Gould and party chartered two White steam touring cars and made a pleasant trip from here through Hollywood, Pasadena, Redlands, Riverside and return to Los Angeles. In his haste to land his passengers at Le Grande station in time for their train, G. M. Adair, driving Mrs. Gould, mistook a wide pedestrian walk for a driveway and was arrested and fined \$5 for driving on it.

## DIGEST OF HILL AUTO BILL IN NEW YORK.

Succinctly stated, the following are the most important requirements of the proposed new automobile law (Hill bill) which has passed the Senate at Albany and is practically sure of a safe journey through the Assembly and the signature of Governor Odell:

Speed limit of 10 miles an hour in cities; 15 miles an hour in districts where houses are 100 feet apart, and 20 miles an hour in the open country.

Warning signs must be placed outside of villages where speed limit of 10 miles comes into force and another sign must be placed where increased speed may be resumed. Signs shall not be more than half a mile from post office and not more than one-quarter mile if houses are scattered beyond that point.

The burden of erecting signs rests with the local authorities. Failure to erect them nullifies the 10-mile speed limit in villages and motorists may go through at 15 miles an hour.

Local authorities in villages shall have power to establish by ordinance the speed for their localities, but shall not require a speed of less than 10 miles an hour. Moreover, when a local ordinance is passed, the penalties for its violation shall be the same to all users of the highway.

A local ordinance may have State penalties for violation, in which case the same shall apply to all users of the highways.

In cities the speed for automobiles shall be not less than for other users of the highways, and the penalties for violation shall

be uniform if the municipality exercises its right of local control of the automobilist, otherwise the State law applies to automobilists, but not to other users of the highway.

Local authorities have power to permit speed tests on their highways.

Four miles an hour is the speed limit on bridges.

Violations of the speed limit are punishable by a fine of not more than \$100 for the first offense; a fine of not less than \$50, nor more than \$100, or imprisonment not exceeding 30 days, or both, for a second offense; a fine of not less than \$100 or more than \$250 and imprisonment not exceeding 30 days for a third offense.

Lesser offenses, such as traveling without lights or number, are punishable by a fine of not more than \$25.

In case of arrest, cash bail must be accepted or in lieu of cash the operator may leave his machine as bail.

Chauffeurs (which designation includes mechanics or men operating machines for hire) must be registered, obtain a certificate and wear a numbered badge, conspicuously.

Motorists shall be required to wait a reasonable time for a restive horse to pass.

All automobiles must carry a number, but manufacturers and dealers will be permitted to license a certain class of vehicles and one number will apply to all.

Park systems can regulate the speed on the roads under their control.

### HILL BILL PASSES N. Y. SENATE.

*Special Correspondence.*

ALBANY, N. Y., March 29.—Senator Hill's bill passed the Senate yesterday, together with the two supplemental bills amending the Penal Code and repealing the Bailey law. The former amends the Penal Code by striking out all reference to the use of automobiles.

The Hill bill was passed without amendment, but at the last moment Senator Armstrong of Rochester rushed up with the assertion that unless the word "main" was inserted before highways in the provision for the regulation of speed in cities and villages by means of sign posts he would fight the bill. He did move to reconsider the vote and held the bill on the table until Senator Hill agreed that the word "main" should be inserted.

The bill has now gone before the Assembly, where it will be amended once more at least, and it will be then reprinted for the eighth time and will be returned to the Senate for formal concurrence even if nothing new is inserted.

The bill should have passed on Monday night, but Senator Bailey held it up and delayed it a day with the plea that some of his constituents were to be here Tuesday and wanted to be heard in opposition. They did not show up yesterday and Senator Bailey having no other excuse voted for the bill.

### TENNESSEE WATCHING AUTO SUIT.

*Special Correspondence.*

NASHVILLE, March 26.—Local enthusiasts are interested in the case of Duncan Dorris, a local automobile dealer who is being sued by Mrs. Snead over whom he ran with his machine some months ago.

This is the first case of the kind that has come up in the local courts and automobile owners are anxiously urging Mr. Dorris to fight the case, even offering to sustain part of the expense. They feel that he has a good case and can win; but fear that, if the case is compromised, it will serve as a bad precedent. Motor car owners throughout the State are watching for the outcome of the litigation.

### RESPONSIBILITY MIXED.

#### Legal Actions Taken in Cleveland to Prevent Accidents.

*Special Correspondence.*

CLEVELAND, March 28.—A proposed bill making it a misdemeanor punishable by fine ranging from \$100 to \$500 or imprisonment for six months in the workhouse, or both, to enter without permission and drive away in another person's automobile standing unattended in the street, or elsewhere, has been framed by some of the members of the Cleveland Automobile Club and will be introduced at once in the present session of the Ohio legislature.

This action is the direct result of an accident that happened a few days ago. A club man drove up to the headquarters of the club for lunch and asked a bystander who appeared to have no important occupation to watch his car. A few minutes later two men came out of the hotel and wanted to hire the car for a ride to the East End. The caretaker, who possessed the little knowledge about an automobile that is a dangerous thing, saw a chance to make \$5, and promptly accepted. He drove rapidly out Woodland Avenue, but after

covering two or three miles the car swerved and crashed against a tree, damaging it so much that it could not be driven back to the hotel.

The owner had the man arrested, and he was haled before the police court, but after delving through many volumes of law books the police prosecutor announced that as the man had been placed in charge of the machine, he could not be punished for starting the power, throwing in the clutch and driving to his heart's content providing he eventually returned the machine to the owner, which it developed the unlucky operator had intended to do.

#### CLEVELAND ORDINANCE AMENDED.

Cleveland's automobile ordinance was thought to be a very satisfactory regulation when it was first adopted, but of late a number of amendments have been added, the latest of which was tacked on at the last meeting of the council. It provides that the machinery of an automobile must be stopped when the vehicle is not in motion unless a driver is in charge of the car. This is also a direct result of an incident that occurred the other day. An operator left his machine standing in front of a building and as he intended to be inside only a few minutes, he left the motor running. This attracted a crowd, and some wiseacre who wanted to air his knowledge, pushed a lever and the car started down the street. Fortunately it was stopped before any damage had been done. And now instead of punishing the trespasser, it is proposed to get after the operator who gives him a chance to trespass.



## ROCHESTER'S FIRST SHOW.

Popular Features of Auto and Cycle Display in Fitzhugh Hall.

*Special Correspondence.*

ROCHESTER, March 26.—Attendance at the automobile and bicycle show which closed tonight at Fitzhugh Hall grew steadily throughout the week. The exhibition has been a success, the dealers having closed a number of sales, and succeeded in interesting many visitors in their cars, who will make purchases later in the spring. In the matter of promotion and management this first Rochester automobile display is unique, as credit for the entire affair is due to two enterprising local newspaper men—Percy F. Megargel, sporting editor of the *Post Express*, and William S. Harrison.

The display of automobiles, motors,

tional colors, the floor of the booths was carpeted, and music was furnished each night by Minges Military Band.

Thursday was set apart as "Doctors' Day," and all the physicians in town were sent special invitations to attend. Friday was designated "Clergymen's Day," for which invitations were extended to all the ministers of the gospel. Every day during the week was "ladies' day," and the attendance of the fair sex was very gratifying.

A leading feature of the show was the original steam machine constructed and used by J. B. West, late of this city, in 1896. It was the first automobile in Rochester, and created a stir here at the time. The exhibition of this somber and crude looking vehicle in the midst of the magnificent touring cars of 1904 served most forcibly to impress upon spectators the marvelous progress made in automobile con-

## A CRUSH OF DIPLOMATS.

Washington Show Crowded on "Diplomatic" and "Congressional" Nights.

*Special Correspondence.*

WASHINGTON, March 28.—Considerable business and an unusual amount of interest in the subject of automobiles marked Washington's fourth annual automobile show, which ended Saturday night to the strains of "Home, Sweet Home." With the exception of the opening night, when a cold rain made the outlook discouraging, the attendance throughout the week was good. The armory was uncomfortably filled on Wednesday and Thursday nights, designated respectively as "diplomatic" and "congressional" nights, with a crowd largely composed of diplomatists from all parts of the world, senators and representatives of national fame, legal and literary lights, and high officials from all branches



FIRST ANNUAL ROCHESTER, N. Y., AUTOMOBILE AND CYCLE SHOW, HELD IN FITZHUGH HALL.

motorcycles and bicycles was well balanced, and afforded a good exposition of the status of the two pastimes in this section of the state. The exhibits were attractively arranged in three lines of booths extending the full length of the main floor. A number of exhibition cars arrived from out of town for the show, among them being several demonstration machines that were kept in readiness at the entrance to the hall to give interested visitors demonstration rides. The interior of the hall was decorated with bunting in the na-

struction in the seven years that have intervened.

An unsuccessful effort was also made to secure for exhibition the original Selden gasoline vehicle on which is based the patent that is the foundation of the Association of Licensed Automobile Manufacturers, and upon which are based most of the important suits pending against unlicensed makers of gasoline cars who are alleged to be infringing the patent. The Selden machine is guarded most carefully as a consequence.

of the Government service, accompanied by members of their families or by friends, filled the aisles and sought information from exhibitors about the latest models.

One of the striking features of the show was the familiarity of the visitors with motor car construction. Last year many of the visitors were woefully lacking in knowledge of the simplest features of an automobile, but this year many Washingtonians who attended the show were able to converse intelligently on the subject of automobiles and their mechanical details.

In interviews with the exhibitors just before the close of the show, all agreed that the exhibition will have an excellent effect upon trade, as it enabled prospective customers "to get a line" on the newest machines under the most favorable conditions. "Sold" cards were in evidence in every exhibit, and while it is not yet possible to tell just how many cars were sold during the week, it is known that the amount of business transacted was fully up to expectations.

Several of the Baltimore exhibitors were so pleased with the outlook for the season that they arranged to open branch houses here. Among these is the Schaum Automobile Co., manufacturer of the Schaum gasoline car, which incorporated here two weeks ago with a capital stock of \$150,000. The factory is located in Baltimore, but a Washington salesroom will be established at once. The Baltimore Motor Car Co., agents for the Thomas cars, have also decided to have a Washington branch, as well as the Maryland Automobile Co., which is agent for the Knox.

The show marked the beginning of the automobile season here and from now on it is believed confidently that business will be brisk. All the garages are well prepared to handle trade and, given a period of good weather, the dealers can see nothing but a big and prosperous season for automobiling. There is no gain-saying that Washington has the automobile fever in a virulent form.

#### BOSTON SHOW ATTENDANCE.

*Special Correspondence.*

BOSTON, March 29.—Members of the Boston Automobile Dealers' Association are well satisfied with the box-office showing made at their recent exhibition in Symphony Hall. A summary made up since the returns came in show a total attendance for the five days of nearly 28,000, divided as follows:

Billboard and first-night tickets given out by exhibitors, taken at the door.....	3,738
Press tickets taken in.....	6,092
Trade admissions.....	2,638
Box office sales, at fifty cents each	15,521

Total admissions for the week 27,989  
Paid admissions at last year's show..... 8,030

The Symphony Hall tickets bore coupons admitting to the automobile and motor boat show in Horticultural Hall. Of these, the number collected by Horticultural Hall ticket takers was 25,398.

#### BUFFALO SHOW PROCEEDS \$5,500.

*Special Correspondence.*

BUFFALO, March 28.—The net proceeds of the recent automobile show held in Convention hall were at least \$5,500, according to a report of Secretary F. J. Wagner, read at a meeting of the board of directors of the Automobile Club of Buffalo, held last week in the offices of President William H. Hotchkiss. They may reach a higher figure, all accounts not

yet having been settled. Half of the proceeds will go the club and half to the Automobile Trade Association of Buffalo. Mr. Wagner stated that applications for membership to the club were made at the show by 110 persons, bringing the total membership to more than 400.

The meeting lasted for several hours, those present being President Hotchkiss, E. R. Thomas, A. H. Knoll, Charles Clifton and F. J. Wagner. A resolution was passed raising the annual dues for all members of the club living in this State from \$2.50 to \$5. The dues for non-resident members outside the State were fixed at \$2.50.

A. H. Knoll was elected a director of the State Automobile Association for one year, beginning April 1.

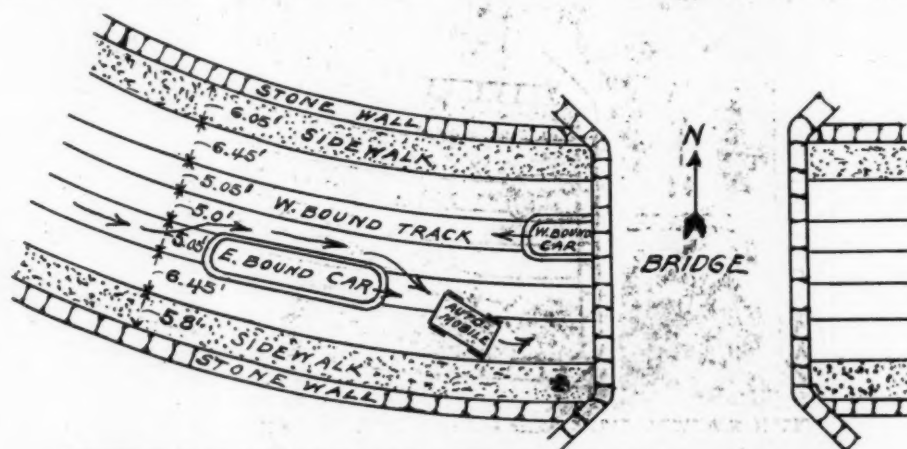
An informal discussion was held in regard to the new clubhouse, but further action in the matter will be taken at a later meeting.

#### FATAL AUTO ACCIDENT.

##### Unskilful Driving in Central Park Causes Death of Miss F. G. Maas.

Through the carelessness or want of skill of the driver and owner of a touring car a fatal accident occurred on Eighty-

The road to the tunnel from the west is down a sharp incline. To add to the danger of the locality for vehicular traffic, the roadway curves to the south so that it is impossible to see any considerable distance ahead on account of the curve and the high walls on either side which form the park embankment. In addition, the distances between the tracks and the sidewalks are so small—about 6½ feet in both cases—that there is not sufficient space for a vehicle to pass between an electric car and the curb. The automobile was driven through the street from the west behind an east-bound electric car. On approaching the tunnel, formed by the bridge across the sunken road, Mr. Jaeger, who was driving, turned the automobile to the left hand side of the road to circle around and get ahead of the electric car. He had almost passed the street car when he noticed a west-bound electric car coming out of the tunnel on the track ahead of him. In order to avoid a collision with this car, and at the same time to keep out of the way of the street car behind him, he accelerated the automobile and attempted to make a sharp turn to get on the right side of the road. Through some miscalculation in steering or accelerating the speed of the automobile, he failed to continue his east-bound pro-



SKETCH PLAN OF 86TH STREET, NEW YORK, WHERE FATAL ACCIDENT HAPPENED.

sixth Street, in New York city during the week. On last Sunday morning Jerome Jaeger, a civil engineer residing in the city, went out in his 20-horsepower Mercedes car accompanied by his chauffeur, Arthur Green, and by Miss Florence G. Maas and Solomon M. Stroock, both of New York. A start was made from a fashionable apartment hotel on the West Side and the route lay through Central Park. The car turned into Eighty-sixth Street, which crosses the park as a sunken road, and on which there are two electric street car lines. The accident occurred a few feet west of a bridge that crosses Eighty-sixth Street in the park near Fifth Avenue. The bridge is about 120 feet wide and the length of the span over the road is about forty feet. A diagrammatic sketch of the point at which the accident occurred is here printed showing the various widths of the sidewalk, car tracks and roadway.

gress, and ran into the curbstone at the point shown in the sketch, just west of the tunnel.

The impact was so great that Miss Maas was thrown out, striking on her head and fracturing her skull. She was picked up at the point indicated by a cross in the diagram. Mr. Stroock was also thrown out and sustained a fracture of the collar bone. He also had a narrow escape from being run over by the east-bound electric car.

Miss Maas was carried to the Endicott Hotel, where she died a few hours later, and Mr. Stroock was taken to his home, 132 West Eighty-sixth Street. Immediately after the accident Mr. Jaeger and his chauffeur were arrested, and subsequently released on \$2,000 bail. The only damage that the automobile sustained was a bent axle, and otherwise it was in perfect condition to be driven back to the garage where the owner houses it.



To a representative of THE AUTOMOBILE Jerome S. Jaeger gave the following statement of the affair:

"I have had lots of experience driving automobiles, and the accident on Sunday I can attribute only to the skidding of the machine on a wet spot, just as I turned away from the curb. When I crossed in front of the car, I saw that I was going for the curb, and I gave the steering wheel a quick twist. The machine responded and was heading away when I felt the car slide, and it turned again toward the curb, and it was beyond my power to change its course. We did not strike hard, and I was surprised to see the other occupants fall from their seats.

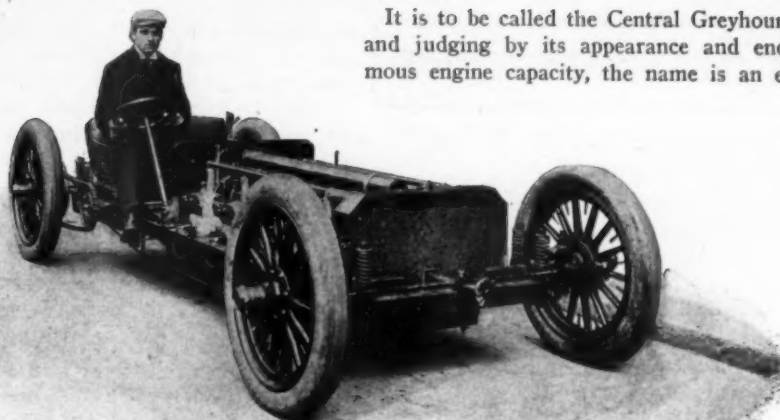
"As a trolley car had just passed us I felt free to use the westbound track. A car on that track came rushing out the tunnel, and that is what caused the trouble. However, nothing would have happened if we had not struck the wet spot on the street.

"I am deeply grieved over the affair, because the persons with me were all old friends who had often been with me on automobile trips. I am out of jail now, but I don't believe I shall be held for what was purely an accident."

### The Central Greyhound.

A powerful racing machine, the nominal horsepower of which is said to be 100, has just been completed by the Buffum Manufacturing Company, of Abington, Mass., for the Central Automobile Company, of this city.

Two views of the machine are presented



QUARTERING VIEW OF NEW BUFFUM 100-HORSEPOWER RACING CAR.

herewith. It will be noted that it is somewhat like the Winton Bullet in appearance. It is, however, longer and lower (only clearing the ground by about six inches), and of apparently greater power.

The frame is of channel steel, the suspension being by means of spiral springs. The power equipment is an eight-cylinder opposed horizontal engine, provided with four carbureters. The radiator is cooled by means of two fans. The drive to the rear wheels is by means of two side chains. The ordinary spark and throttle control are used. The wheel base is 120 inches and the overall length is thirteen feet. The machine weighs 2,300 pounds.

This racer is to be entered by the Central Automobile Company in all road or track races in the Eastern States for which it is eligible, and will be driven by Lafayette Markle.

It is to be called the Central Greyhound, and judging by its appearance and enormous engine capacity, the name is an ex-

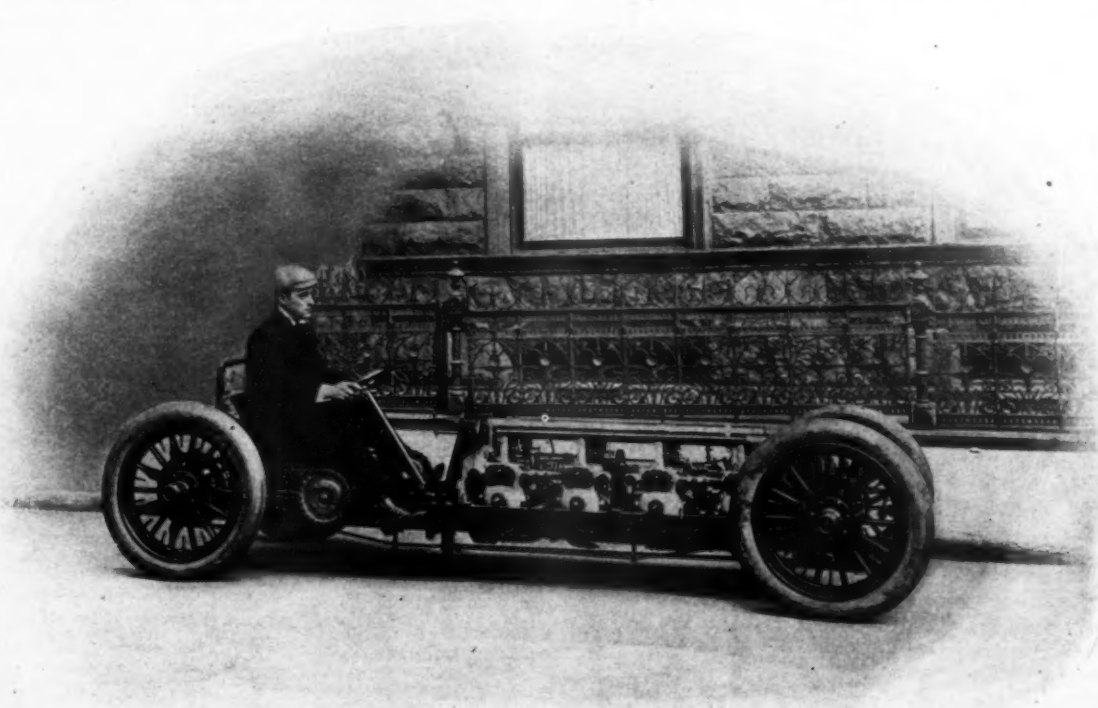
tremely suitable one, as the machine seems likely to be a record-breaker.

### WASHINGTON MOTOR 'BUS SERVICE.

*Special Correspondence.*

WASHINGTON, March 28.—The Auto Transit Co. has been incorporated here to operate a line of sight-seeing automobiles. The capital stock is \$150,000. The officers of the company are as follows: T. C. Noyes, president; W. E. Schneider, vice-president; E. A. Beekman, secretary and general manager. The officers, with F. T. Howe and W. C. Bryan, will form the board of directors.

The company now has one car in operation, but two others will be put in service in April. The car in use is an electric built by the Vehicle Equipment Co. and has a carrying capacity of forty passengers.



SIDE VIEW OF THE NEW OCTUPLE OPPOSED HORIZONTAL CYLINDER RACING CAR BUILT BY BUFFUM.

## Correspondence

### Proportion of Explosive Mixture.

Editor THE AUTOMOBILE:

Sir: If there is a formula showing proportions of gasoline and air necessary for explosion by regular "sparker," would you kindly favor me with the information, or advise me where to obtain it.

G. W. B.

Pittsburg, Pa.

For perfect combustion with no unused residuum of oxygen, the proportion of liquid gasoline to air is roughly 1 to 8,000 by volume, but the highest efficiency in the explosion motor is obtained by using a more dilute mixture—about 1 to 10,000 or 1 to 12,000.

### Increasing Engine Speed.

Editor THE AUTOMOBILE:

Sir: I have a four-cylinder vertical engine giving me approximately 20.7 horsepower at 900 r.p.m. I want to increase the r.p.m. to 1,500, which will give me approximately 31.05 horsepower. What is it necessary to do to secure this increase?

JAMES A. GIFFARD.

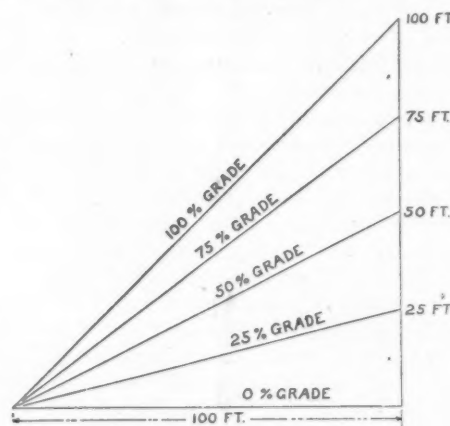
If we understand you correctly that the engine is designed for the lower speed, it is hardly likely that anything that you can do will produce any considerable increase in speed. Possibly you can enlarge the valve chamber a trifle, to permit the use of a larger exhaust valve, but if the motor is light you will risk cutting out too much metal and weakening the wall. If you can manage to increase the diameter of the exhaust valve 1-4 inch the other details can probably be managed. They will be as follows: Increase the lift of the exhaust valve to 1-4 of the inner diameter of the valve; use very much stiffer exhaust valve springs, about treble as stiff as before; make a new cam shaft, 1-16 to 1-8 larger than the old, and cut new exhaust cams of suitable lift and so formed as to begin to open the exhaust valves at about 3-4 stroke of the pistons; enlarge and lighten the inlet valves to the utmost possible; restrict their lift to 1-8 inch and use springs of a tension of about 1 1-2 pounds to each ounce of the valve's weight—or, better, devise means of opening the inlet valves mechanically, and use springs double as stiff as above indicated; increase the range of spark advance about one-quarter; if possible, have new pistons made, with the wristpin so located that the clearance space above the pistons will be shortened 3-16 or 1-4 inch; and provide with the utmost care for the lubrication of all working parts. Use a larger vaporizer and muffler, and increase the sectional area of your inlet and exhaust piping, ports, etc., 40 to 50 per cent. If the motor

drives an automobile with sliding gear speed change, the flywheel should be lightened 30 to 50 per cent., or the increase in motor speed will be likely to wreck the gear shafts when the clutch is engaged. For the details of these changes it will probably be economy to consult a good designer or builder.

### Grade and Angle of Slope.

Editor THE AUTOMOBILE:

Sir:—As the significance of term "per cent. of grade" is not always well understood, the table given herewith has been prepared so that by reference to it the angle of slope corresponding to a given per cent. of grade, or vice versa, can be seen at a glance. It may be well to add a word of explanation as to how the figures in the table were derived. The per cent. of grade is taken as 100 times the ratio of vertical rise to horizontal distance; for example: if a road



USUAL METHOD OF MEASURING GRADE.

ascends 100 feet vertically in a horizontal distance of 100 feet, the percent of grade is 100. In this case, the angle of slope would be 45 degrees, so that a percentage grade of 100 corresponds to an angle of slope of 45 degrees. Similarly, if the rise is 10.51 feet in a horizontal distance of 100 feet, the angle of slope is 6 degrees.

CARL THORDEN.

Buffalo, N. Y.

CONVERSION TABLE FOR PERCENTAGES OF GRADE AND DEGREES OF SLOPE

Angle of slope. D'gr's	Percent- age of Grade.	Angle of slope. D'gr's	Percent- age of Grade.	Angle of slope. D'gr's	Percent- age of Grade.
1	1.75	16	28.67	31	60.09
2	3.49	17	30.57	32	62.49
3	5.24	18	32.49	33	64.94
4	6.99	19	34.43	34	67.45
5	8.75	20	36.40	35	70.02
6	10.51	21	38.39	36	72.65
7	12.28	22	40.40	37	75.36
8	14.05	23	42.45	38	78.13
9	15.84	24	44.52	39	80.98
10	17.63	25	46.63	40	83.91
11	19.44	26	48.77	41	86.93
12	21.26	27	50.95	42	90.04
13	23.09	28	53.17	43	93.25
14	24.93	29	55.43	44	96.57
15	26.79	30	57.74	45	100.00

### Horsepower of Cycle Motor.

Editor THE AUTOMOBILE:

Sir: What horsepower should a four-cycle gasoline motor of 3 1-16 in. bore by 3 3-4 in. stroke develop at 2,000 r.p.m.?

Does the Waltham Mfg. Co. make a motorcycle this year? What are its power, drive, and cost?

W. C. D.

Merion, Pa.

(1) From 2 1-2 to 3 horsepower, probably. A very good motor might brake 3 1-2 horsepower.

(2) Why not write direct to the manufacturer? The Waltham company can answer your inquiry authoritatively.

### SCARRITT TALKS TO HORSEMEN.

President Scarritt, of the Automobile Club of America, attended a meeting of the Road Drivers' Association last week and by the very lucid and earnest manner in which he presented the views of his followers, not only won the good will of the horsemen, but had them pass a resolution opposing any amendment to the present laws at Albany, that would permit local municipalities to make speed regulations at will.

Mr. Scarritt said he came bearing an olive branch, and spoke of the position taken by his organization against the use of the Speedway by motor-car operators, and although admitting there were some fool automobilists just as there were fool horsemen, he declared that 90 per cent. of automobile owners were law-abiding citizens and only wanted what was just and fair in legislative matters.

Of the forty or more horsemen who listened to his speech, not a few raised their hands to feel bumps on their heads, the result of recent collisions with wildcat operators, and fought against the winning ways of Mr. Scarritt. One driver in particular had recently experienced a toss in the air when a big car ran straight into his horse and wagon, tumbling himself and his wife to the ground, and he looked like a stumbling block in the path of harmony.

However, the persuasive and common sense talk of President Scarritt finally erased all obstacles and he was given a vote of thanks by the association, which subsequently instructed its secretary to write a letter to Albany, protesting against any legislation that would allow the various localities to make their own speed ordinances.

RICHARD L. PALMER, an ex-street railway operator of Cleveland, is organizing a company to operate an automobile passenger service between Cleveland and Warrensville. The county is building a macadamized road between the two places which will be completed this spring. Mr. Palmer expects to buy several large buses that will carry eighteen or twenty passengers each.



## Huntington Prize Cup.

One of the handsomest prizes offered for automobile racing is the Huntington Cup, deeded to the Automobile Club of Southern California by Henry E. Huntington. This handsome silver cup, shown in the accompanying engraving, is valued at \$1,000, and is to be won on the local track at Los Angeles, Cal. It is to be owned by the club to which it was deeded and to be held in the possession of its last winner until challenged and defeated.

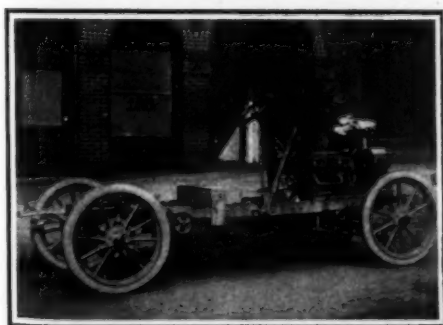
All races for the cup are to be "open," but only amateur owners of cars are eligible to compete for it. There are no restrictions as to size of car or horsepower.

To H. D. Ryus, driving a 10-horsepower White steam car, belongs the signal honor of having "lifted" this trophy for the first time, (at Agricultural Park, Los Angeles, November 20, 1904,) and, too, against a formidable field, comprising the following stripped cars: Mercedes, 40-hp.; Tinscher, 40-hp.; Toledo, 24-hp.; Mors, 40-hp.; Tourist, 20-hp. This race was a five-mile open, and Mr. Ryus's closest competitor was Frank A. Garbutt, in another 10-hp. White steamer.

It has been decided by the Automobile Club of Southern California that Mr. Ryus, being now manager of the White automobile garage at Los Angeles, will lose his chance to again race for this cup, which he feels is an injustice, since he is not paid for racing, but does it for the enjoyment and the honors.

### MARTINI CAR AGENCY.

Alexander Fischer last week received the first of the Martini cars for which he has secured the American agency. The cars are made under the Rochet Schneider patents by the Martini Co. of Geneva, Switzerland, the manufacturer of the Martini rifle. The Martini is modeled on the lines of the Rochet with a number of changes which have been made to adapt the machine for American roads. The engine has three inches more clearance and



CHASSIS OF NEW MARTINI CAR.

the bearings have been given a much larger surface. The Martini is the car which made the ascent of Mont Chasseral, a feat which created considerable comment in European automobile circles.

## "TWEEDLE THING" WAS LOOSE.

### That Was the Reason the Automobile Stopped on Broadway.

In the snowstorm yesterday afternoon an automobile, bearing the initials "J. H. S." and occupied by the driver and a lady, came down Broadway. The lady wore a gorgeous hat trimmed with purple plumes, a boa of white fur, a muff of the same material, all beautifully set off by a magnificent tiger skin rug. The driver drove in and out between the car and vehicles with the carelessness of a man who can afford to run risks. Motormen particularly resented his dodging.

"When them swell dames ride in benzine buggies," said one, "they jest own the



H. E. HUNTINGTON PRIZE CUP.

road. But you jest watch. There! I never did take much stock in puff carts!"

The automobile had gone on strike even as he spoke.

J. H. S.—for the driver talked like an owner—got out with his bundle of wrenches and did the customary crawl under the machine. The traffic at Duane Street and Broadway began to pile up. Also a crowd, while the purple plumes cuddled down under the tiger skin and criticized the intelligence of J. H. S.

"Jackie, dear," said she, "there's a dreadful crowd gathering. Do hurry up. Can't you find out what's the matter? Perhaps the what-d'ye-call-it's loose. No? Well, it must be that other thing that's always going wrong."

"Jackie, dear," did his best, but he was embarrassed by the grinning crowd. A sympathetic policeman tried to help, but all he knew about "them bubbles was that they took a hell of a lot o' mendin'." And

the snow cast a pure mantle upon the lips of the truckmen piled along Broadway. The lips needed it.



BUCKBOARD MAKING CENTURY RUN.

"Well," said the purple plumes after a long silence, "I knew all the time I would have to get out and mend it myself."

She got out, and at the first glance at the automobile's interior economy she exclaimed:

"There, Jackie, dear, you're a good boy; but you oughtn't to wear goggles when you're looking for breaks. I told you it was the tweedle thing. It's loose. Screw it up."

Jackie did so.

"Chr-r-rug, chug!" said the automobile, cheerfully.

"Told you so," said the purple plumes, as they moved off.

"I take that back about swell women in benzine buggies," said the motorman.—*The Sun, N. Y.*

### A CENTURY IN A BUCKBOARD.

The first automobile century run out of Cleveland for the season of 1904 was made recently by Fank Adams and Gail Crawford in an 4-horsepower Orient Buckboard weighing 500 pounds. The route was eastward through Painesville and Perry to Geneva, Ohio, and return to Cleveland. The road was fearfully heavy with mud in many places, and several times the little machine had to be hauled through mud up to the axles, yet there were no breakdowns. Some of the difficulties of the run can be imagined from the fact that the start was made at 7 a. m. and Messrs. Adams and Crawford did not return until 10.20 p. m., weary and mudstained. Precisely the same time was made going and returning.

### GONE TO PACIFIC COAST.

The Mobile Carriage Co., of San Francisco, has recently placed at the head of its mechanical department G. Stewart, who was for nine years superintendent of the construction department of the George N. Pierce Co., where he built the first automobile turned out by the Pierce company and has supervised the construction of its cars ever since, up to his acceptance of the San Francisco engagement.

**HAMPDEN PARK RACE MEET.**

**Springfield Club to Open Season May 30.  
—Clubhouse Plans.**

*Special Correspondence.*

SPRINGFIELD, Mass., March 28.—The Automobile Club of Springfield will hold races at Hampden Park on Memorial Day. The one-mile oval track has been leased of Manager Shea and will be put in shape for motor racing. It will be necessary to bank the curves, as the track has never before been used for anything faster than horse and bicycle racing. A race meet committee is working on the details of the day's events, which will include races in several classes. Owing to lateness, no attempt will be made to secure professional talent, but many of the local cars are capable of showing speed and the occasion will be of sporting interest. The track will be under control of the club throughout the season and members will be at liberty to use it for speeding at all times. It is likely that the Memorial Day event will be the first of several during the season, and efforts will be made to secure professional racers for later affairs.

The club feels that the best results would be secured on a circular track, which would also offer greater inducements to racing men of national reputation. The matter of building such a track has been under consideration since last fall and there is a possibility that it may materialize. The main obstacle is the large expense involved. Land is available east

of the city and the Springfield Street Railway Co. has expressed willingness to extend its lines to this spot if the plan goes through. Should the track be built it would probably be on a partnership basis with the owner of the land, who may be induced to construct it and lease it to the club for a term of years.

**PROPOSED TOWN CLUBHOUSE.**

A house committee has been appointed and the monthly meeting of the club last week was devoted in part to consideration of the matter of permanent city quarters. These will be commodious and suited to the needs of the growing club. It is planned to have not only card, smoking and reception rooms but garage accommodations under the same roof. Offers have been received from private individuals to construct a building for the club's use.

**A Novel Agency and Garage Arrangement.**

A novel plan has been carried out in the arrangement of the salesrooms and garage of the Quaker City Automobile Co. of Philadelphia. The new six-story fireproof building is arranged to house five companies—the Oldsmobile Co. of Philadelphia, the Pope-Toledo Touring Co., the White Touring Car Co., the Franklin Motor Car Co. and the Quaker City Automobile Co. The last named concern devotes its entire attention to the storage and repair of cars, the selling being attended to

by the first four companies, each selling the machines from which the company is named. The building is planned with four store fronts, one being devoted to each company, so that there is ample opportunity for individuality in the display. It will be noted that the representation comprises four popular cars—an air-cooled machine, a light runabout, a steamer and a large touring car. The Quaker City company owns an interest in each of the four selling companies, but the business will be run as five distinct concerns.

The Oldsmobile company has placed one of the largest orders yet recorded, the specified deliveries for this year being 650 cars, with an option of 500 more. A correspondingly large order has been placed for the Pope-Toledo four-cylinder cars, and the Franklin and White selling companies have also made arrangements for a large number of cars for this year.

The Quaker City company will make a specialty of repairing and storing the several makes of cars handled by the selling companies. The garage occupies five of the six floors, all connected by electric elevator. The basement is devoted to storage space and a power plant consisting of a 250-horsepower gas engine, electric generators and switchboard. The sixth floor is used for a repair shop, shown on opposite page, and is finely equipped with the best modern machinery available.

**DETROITERS DISAPPOINTED.**

**Plans for Adding Link to Boulevard System Disapproved.**

*Special Correspondence.*

DETROIT, March 28.—Automobilists of this city who have been planning the addition of Lafayette Boulevard to the park system of boulevards this year, were severely disappointed last Friday, when the common council committee on ways and means slashed Park Commissioner Bolger's estimate for improvements from \$93,000 or more, to \$13,350. Not only were the motorists hoping for the establishment of a boulevard on Lafayette Avenue, but many other taxpayers and residents were pulling every string to get the estimate allowed.

A similar estimate was turned down last year, when the commissioner attempted to get it through the council, but it was hoped that this year more leniency would be shown, principally because of the wonderful growth in the number of automobile owners in Detroit and their urgent demands. The estimate was cut only after long argument before the committee, to whom it was plainly shown that the sentiment of nearly the whole of the city was for the boulevard and the exclusion of business traffic from the thoroughfare, making it a fine drive for automobiles and carriages. The money allowed will be sufficient only to pay for patching those portions of the avenue now surfaced with asphalt.



**HORSELESS VEHICLE AND AUTOMOBILISTS ADVERTISING THE ROCHESTER, N. Y., SHOW.**



Those interested are not willing to acknowledge complete defeat yet, however. Before the estimate goes to the highest authority, the board of estimates, it must first pass the common council as a body. It is hoped that by the time it reaches the council sufficient influence will have been brought to bear to overrule the recommendation of the ways and means committee and at least raise the appropriation. If the council stands by the committee, the board of estimate will not

ment will furnish a connecting link in a continuous boulevard circuit around the city, as the park commission now maintains Jefferson Avenue on the east, one on the north and Western Avenue on the west.

#### MOTOR PHAETONS FOR BELLE ISLE.

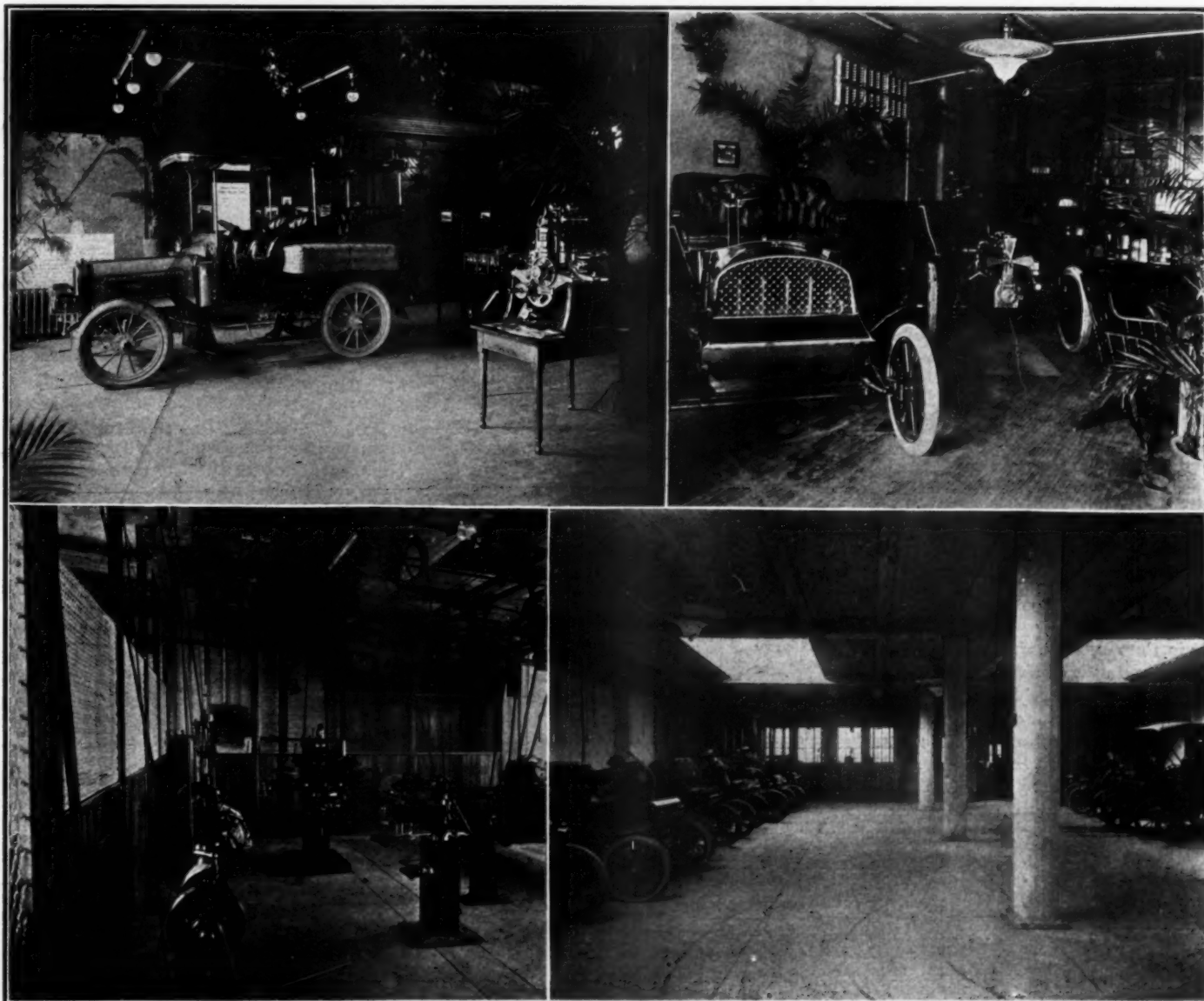
Park Commissioner Robert Bolger has closed a deal with the Huber Automobile Company for three large automobile phaetons which the city will use to transport sightseers around Belle Isle Park. This park is one of the most beautiful in

with large seating capacity. The fare across the bridge will be five cents, and for the circuit of the island, twenty-five cents.

#### 'FRISCO CHAUFFEURS ORGANIZE.

*Special Correspondence.*

SAN FRANCISCO, March 23.—The drivers of motorcars in this city have organized a society for mutual protection and the promotion of good-fellowship. The name of the organization is the Chauffeurs' Associa-



Pope-Toledo Show Room.  
Portion of Machine Shop.

Franklin Show Room.  
Storage Room on Top Floor.

#### INTERIOR VIEWS IN THE NEW SALESROOMS AND GARAGE OF THE QUAKER CITY AUTOMOBILE CO., OF PHILADELPHIA.

have power to make any addition to the figure named, but should the council raise it, the board would have the right to again reduce it to the figure set by the ways and means committee, or to any figure which it should deem proper for the repairing of the avenue.

Lafayette Boulevard, which is such in name only at the present time, is the only available avenue without car tracks in the southern part of the city. Its improve-

ment will furnish a connecting link in a continuous boulevard circuit around the city, as the park commission now maintains Jefferson Avenue on the east, one on the north and Western Avenue on the west. This park is one of the most beautiful in

with large seating capacity. The fare across the bridge will be five cents, and for the circuit of the island, twenty-five cents.

tion of California, Number 1. The officers are: S. Hewson, president; A. R. Newcomb, vice-president; T. J. Swentzel, secretary; J. P. Jarvis, treasurer; Louis Lucky, conductor; C. Anderson, sergeant-at-arms. By-laws have been drawn up and a scale of wages fixed. The operators are divided into three classes, each with a sliding scale of wages. Before accepting a position the chauffeur must pass an examination as to his fitness for and skill in operating.



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No. 14

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**Commercial Vehicle Trials.** An inspection of the entries for the commercial vehicle trials to be conducted under the auspices of the Automobile Club of America next week is instructive. Steam and gasoline vehicles are in the majority, there being two of the former and nine of the latter. Of electrics there are only six vehicles entered and the remaining entry is a combination truck in which the prime mover is a gasoline engine and in which the drive is electric.

The capacity of the vehicles ranges from a 500-pound load to 10,000 pounds, or from the light delivery wagon to the heavy freight truck.

The results of the contest this year will be of more than ordinary interest, for the competing vehicles will not only be subjected to a prolonged test, extending over a week, but will be tried out under the every-day conditions of delivery wagon service. In former trials indeed it was the reliability of the wagon rather than its serviceability that was demonstrated by the trials.

Last year, for example, the competition was confined to one day, and the vehicles were sent over a cut and dried route with a uniform load and were not subjected to any stoppages and the like—such demands as would be made on a vehicle in the service of any common carrier. On this occasion the capacity of a wagon to make a run over a certain definite course will not suffice. It must answer the various requirements of loading and unloading, manoeuvring

in tight places and the like, which the horse-drawn vehicles satisfy. The important details of fuel or battery replenishment in ordinary daily service will be tried out, and any inconveniences or interruptions of service from these causes will count for or against the power-driven vehicle, not as between one make and another but in the far more important comparison between power-driven and horse-drawn wagons.

The plan of the club was a practical one, and the results of this trial will be closely noted not only by the builders of automobiles, but by the users of horse-drawn vehicles who look hopefully to the automobile for a solution of many present day difficult problems of urban and suburban freight transportation.

### Growth of Garages.

The prevailing and widespread confidence in the continued growth of automobiling and the motor-car industry is in no way better shown than by the rapid extension of sales and storage and repair facilities. From all important commercial centers of the northern States from Maine to California, and from a number of southern cities, come almost daily reports of new garages opening. New York, Boston, Cleveland and Chicago lead in this respect, with Pittsburg, Washington, Philadelphia, Buffalo, Detroit, Minneapolis, Denver and San Francisco not very far behind. The last six months has seen the public facilities in this field more than doubled in most of these cities. The changes made necessary by the expansion of the business and the endeavor of the proprietors to provide adequate facilities for the immediate future have been so many and so rapid that the city directories and even the telephone books of the respective cities are practically useless as a guide to the stations. Many of the garages opened a year ago or less have been outgrown and their proprietors have been obliged to erect buildings especially designed for the new purpose. Investments in these frequently run into sums from \$10,000 to \$50,000, and expense is not spared in providing every facility for handling and repairing cars in the best and most expeditious ways.

Such large investments and the superior character of the new structures—not only those for public garages but also private automobile houses in course of construction—indicate the permanent character of the automobile pastime and trade. No man is going to spend \$25,000 to \$50,000 merely to provide accommodation for the toys of a season or two. Abnormal as the expansion may seem, it is evident that no doubt exists in the mind of any that it is a permanent one, and, taken in conjunction with the great interest in motoring as made manifest by the unprecedented crowds that attended all the automobile shows during the season that has just

closed, it furnishes the most satisfactory forecast of the future.



### The Innocent Passenger.

One of the saddest automobile accidents that ever occurred in this country is that described elsewhere in our news columns, and which resulted in the death of Miss Florence G. Maas. A fatality in which a young and promising life is cut off without warning is a sad subject for consideration even by strangers. And when such a death is occasioned not by a natural illness, or some unavoidable accident, but by recklessness and disregard of the ordinary precautions of safety on the part of another, sadness must give place to horror.

It is the same sort of discretion that causes one man to shoot another because he "didn't know the gun was loaded" that is possessed by many automobilists, as can be seen by a little observation on the streets and highways any fine day. And it is unfortunate that in case of a fatality with the gun or automobile under such circumstances the wrong person is killed.

It is a too common spectacle to see an automobile driver swinging out of his proper position on to the wrong side of the road, when he cannot see far ahead, in the expectation that because of the wonderful manageability of the automobile, as compared with other vehicles, he can avoid collision or mishap. This in fact is the most serious offense practiced by inconsiderate and irresponsible automobilists on the highway and fruitful of more dangers to other users than any excessive speeding of a machine on its own side of the road. Yet strangely enough the wisdom of legislators has never touched this point.

Probably criminal proceedings or suit for heavy damages would act as the only deterrent for this class of drivers in case of mishap.

Such persons are the worst enemies of the automobile industry and sport, as they are within the ranks. One fatality such as occurred in Central Park, in which the argument against the automobile is furnished by an automobilist, creates more prejudice and antagonism than a whole year of verbal opposition on the part of road drivers and others who can see no good thing in automobiling.

The man who does stunts on a clear and unobstructed highway and who is driving alone is only risking his own neck. When a driver seeks the company of other persons to go out with him for a ride he assumes a responsibility that he cannot evade. It is his plain duty to drive carefully and slowly where the road ahead is not clear and keep before him constantly the comfort and safety of his guests. An expert riding with another expert knows what "chances are being taken," whereas a novice may innocently find pleasure in "stunts" that if understood would call out a strong protest.



## A. C. A. SERVICE TEST OF MOTOR WAGONS.

Eighteen machines have been nominated for the service test of motor wagons to be given under the auspices of the Automobile Club of America, in the streets of New York during the week of April 4. Two of the eight classes, those for machines carrying dead loads over 5,000 and less than 8,000 pounds failed to fill. Nine of the machines are entered for the class for vehicles carrying loads from 1,000 to 2,000 pounds, five being electric power, three of gasoline, and one of steam. This is believed to be the most promising field for commercial vehicles, although there will of course, be a demand for very light machines and very heavy machines.

In all there are nine gasoline, six electric, two steam, and one combination gasoline and electric vehicle named.

The test will start on Monday, when the wagons in the first five classes will be placed in the service of the American and Westcott express companies for service under actual working conditions. Wagons in the two heaviest classes will perform similar service with the H. Clausen and Son Brewing Company.

In each class, awards will be made for the best performance based on economy of operation in time and fuel, ratio of dead load, per ton mileage, general reliability and availability for service.

Classification shall be on the basis of dead-load carried, all wagons, whether steam, gasoline or electric, to operate in the same class.

The classes that filled (dead-load to be

exclusive of operator, observer, and delivery man) are as follows:

First Class: To carry a dead-load of 1,000 pounds or under.

Second Class: To carry a dead-load of 1,000 to 2,000 pounds.

Third Class: To carry a dead-load of 2,000 to 3,000 pounds.

Fourth Class: To carry a dead-load of 3,000 to 4,000 pounds.

Fifth Class: To carry a dead-load of 4,000 to 5,000 pounds.

Eighth Class: To carry a dead-load of 8,000 to 10,000 pounds.

The start will be made from Grand Central depot on Monday at 9 a.m. Following are the entries with detail information supplied by the manufacturers:

Steam and Gasoline Vehicles										Electric Vehicles							
Class	Manufacturer	Selling price	Type of Motor	Weight including fuel supplies and equipment lbs.	Load to carry lbs.	Capacity, Gals.			H. P.	No. of Cylinders	Class	Manufacturer	Selling price	Weight, including supplies	Load to Carry	Weight Batteries	Cells
						Water	Gas.	Kero.									
2	Commrcial Auto Co.	\$2,500	Steam	3,400	1,200	25	..	6	14	3	2	Lansden Motor Car Co.....	\$2,000	2,775	2,000	833	45
2	Chas. Rockliff . . .	2,500	Gas.	4,000	1,000	20	8	..	15	2	3	Electric Vehicle Co. ....	2,500	5,300	2,000	1,630	42
					2,000						5	" " " .....	3,300	7,300	5,000	2,020	44
4	Union Motor T. Co.	3,500	"	6,500	4,000	40	30	..	20	4	2	Pope Motor Car Co.....	1,400	1,200	....	....	..
2	Carlson Motor V. Co.	....	"	....	....	....	....	....	....	..	2	" " " .....	1,400	1,200	....	....	..
3	Knox Automobile Co.	2,300	"	2,600	2,100	None	15	..	16	2	2	The Cantono Elec. Tractor Co.	1,700	....	....	1,090	42
2	" " "	1,600	"	2,000	1,100	"	9	..	8	1	<b>Combination, Gasoline and Electric</b>						
1	" " "	1,500	"	1,800	700	"	7	..	8	1	8	Fischer Motor Vehicle Co. . .	5,000	14,000	10,000	20 hp., 4 cylinders, Bat. wt. 1,730 lbs. Cells ..... 48 Amps. per hr. 100	
1	Olin Motor Works .	850	"	1,200	500	4½	5	..	4½	1							
1	" " "	850	"	1,200	500	4½	5	..	4½	1							
3	Cons. Motor Co. . .	....	"	....	....	....	....	....	....	..							
8	Commercial Auto Co.	....	Steam	....	....	....	....	....	....	..							

### FORCING THE SEASON.

#### Delights of a March Run From Boston to New Haven.

The first automobile that has made the 175-mile trip from Boston to New Haven under its own power since last fall arrived in the Connecticut city last week, according to the *New Haven Saturday Chronicle*, with a party of three local enthusiasts—Samuel Campbell of the Campbell Motor Carriage Company, F. E. Bowers of the Gilbert Manufacturing Company, and Harry Smedley of the Smedley Company.

The party started from the Hub on Monday in a new Rambler touring car that Mr. Campbell had secured at the Boston automobile show, and took the State roads through Worcester to New Haven that formed part of the route of the A. C. A. reliability run course in October, 1902. In character, however, the run was more like the endurance run of last October than of the year before. Between Boston and Worcester the roads were covered with mud and slush from three to four inches thick and in some places were two feet deep in snow. After passing Worcester, they grew worse and between Spencer and

Palmer the machine had to be forced through from twelve to fourteen inches of mud. At one place they came to a team and wagon stalled in mud to the hubs of the wheels and before they could pass, the motorists had to add the power of the car and their own physical strength to that of the animals to extricate the wagon.

After sleeping at Springfield, the motorists resumed their trip over a heavy road and sometimes through water hub deep to Windsor Locks. Beyond Windsor Locks the car got stalled for the first time, in a foot of mud that was so heavy that they had to use a rope and some sand bags to get out. Nearly two hours were consumed in working the machine a quarter of a mile. Beyond that place the roads were better as far as Hartford; and from Hartford to New Haven they were in better condition than anywhere along the route, except a short stretch outside of Berlin.

A CONVENIENT little book, "An Automobile Record," with entry columns for distances made, speed, road conditions, and other items of interest, can now be had at Brentano's.

### TO TEST LICENSE ORDINANCE.

#### Special Correspondence.

DETROIT, March 28.—Encouraged by many local automobilists, John P. Schneider, the Detroit retail dealer, has decided to test the constitutionality of the present city ordinance requiring the licensing of automobiles. He says that he has not the slightest doubt that the law is invalid and he thinks the courts will so decide.

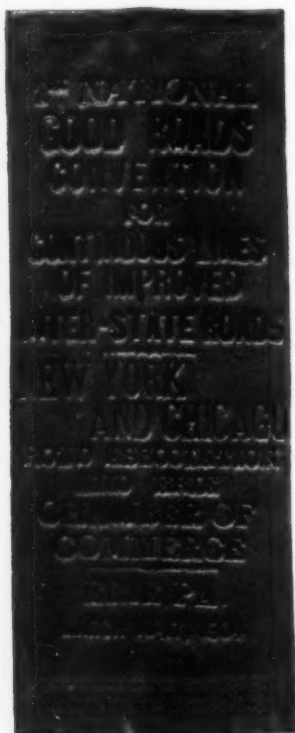
"There is no reason on earth," said Mr. Schneider, "why there is any validity in a law which compels a person to take out a license for a machine which he owns, and which he is going to use for his own pleasure, or in his own business for that matter. The automobile should not be discriminated against, and if the ordinance is valid it should hold with all classes of vehicles. I do not think a law can compel me to pay a fee and put a tag on my machine, and I want to see what the courts will do with such an ordinance. This test has been tried in Chicago and New York and in both cities the ordinances were declared invalid, and I do not see why this should not be true in Detroit. It is certainly an imposition."

## ERIE CONVENTION ADOPTS RESOLUTIONS.

**Favors Route Through Southern Tier of Counties for New York-Chicago Highway and Endorses National and State Aid in Inter-State Road Building.**

*Special Correspondence.*

ERIE, March 26.—Resolutions approving national aid in highway improvements; endorsing the original plan of the New York and Chicago Road Association for a continuous good road from New York to Chicago through the southern tier of counties in New York State and westwardly through Erie, Cleveland, and Toledo; thanking W. L. Dickinson for his earnest and untiring work in bringing the delegates together at the Erie convention; requesting the executive committee of the association to call the next national convention at Elmira, and authorizing the chairman of the Erie convention to appoint



DELEGATE'S CONVENTION BADGE.

county committees for the purpose of organizing conventions to be held wherever and whenever feasible, were unanimously adopted by the committee on resolutions just before the adjournment of the two days' good roads convention held by the New York and Chicago Road Association in the Chamber of Commerce hall in this city on March 16 and 17.

More than fifty delegates from New York State cities and from Massachusetts, Pennsylvania, Ohio, Michigan, Illinois and South Dakota, were in attendance.

Col. Albert A. Pope presided over the meetings and made the opening address, his topic being "Transportation." United States Senator A. C. Latimer followed on the subject of "National Aid in Road

Building," and the topic of "National Aid in the Construction of Continuous Lines of Improved Highways" was dealt with by Frank Z. Wilcox, of Syracuse. Senator H. S. Earle of Michigan spoke on "The Value of State Aid for Continuous Lines of Improved Inter-State Roads," and was followed by Judge George McCann, of Elmira, who told of the road improvement work that had been done in the southern tier of New York counties, through which the proposed New York-Chicago road will pass.

The first speaker on the second day was Frank D. Lyon, examiner of highways for New York State, who gave interesting facts regarding the highway work throughout the State, and made comparisons of the New York and Pennsylvania state aid laws. State Highway Commissioner Joseph W. Hunter cited the Pennsylvania counties around Philadelphia as examples of the benefits of issuing bonds for road improvement.

The afternoon session on Thursday was opened with an address by Col. W. L. Dickinson, vice-president of the N. Y. and C. R. A., and president of the Connecticut Valley Highway Association, who spoke on "co-operation of National and State Governments with the Counties, Cities and Towns in Building Inter-State Roads." One of the principal addresses was by John Farson, president of the Chicago Automobile Association, who spoke on the "Advantages of an Inter-State System of Good Roads." A paper on "Care and Maintenance of Roads," by Charles W. Ross, street commissioner of Newton, Mass., was read, the author being unable to attend the convention.

## NEW DETROIT GARAGES.

**Ford Motor Co. and Russell & Co. Open Fine Establishments.**

*Special Correspondence.*

DETROIT, March 28.—The new retail store and garage of the Ford Motor Company was opened last week at 234 Jefferson Avenue, with a full line of Ford cars. The store is 60 feet frontage by 200 feet deep and has been refinished and redecorated throughout for its new occupants. It will contain an office, repair shop and storage room, besides the display and salesroom. Owners of Ford machines in Detroit will be able to store their autos in the big storage room.

The second new garage and store to be opened within a fortnight is that of W. A. Russell & Co., at 248 Jefferson Avenue, only a few doors from the Ford establishment. This is said to be one of the most complete garages in the West. A large covered driveway extends from the avenue through the front of the building to the spacious garage in the rear of the offices. The garage has the most modern facilities, including a complete machine shop, charging apparatus for electrics, paint

shop and in the gallery a spark plug factory. There is also room for the storage of more than 100 automobiles, and already a large number of private machines are being "boarded." In the showroom adjoining, is carried, in addition to the automobiles, a full line of supplies and auto clothing. W. A. Russell & Co. are agents for the Berg and Winton gasoline cars and the Baker electrics.

## NOTES OF THE CLUBS.

It is apparent that there will be a good list of entries for the Massachusetts Automobile Club's hill climbing contest on the Commonwealth Avenue hill, Brighton, on Patriot's Day, April 19. The entries close April 12, with William Wallace, chairman of the club's racing committee, at 95 Kilby Street, Boston. Already several interesting entries have been received. Among them are President H. W. Whipple, of the American Automobile Association, with his big Mercedes car; H. L. Bowden, of Waltham, with his Mercedes and a Panhard; L. J. Phelps, of Stoneham, with his record-holding Phelps car; and at least one new Napier car.

Chairman Frank X. Mudd, of the Chicago A. C., has prepared the following schedule for the part of the St. Louis tour from Chicago to East St. Louis: Leave Chicago 9 a.m., August 8, thirty-seven miles to Joliet via Riverside; leave Joliet 2 p.m., fifty-four miles to Pontiac, via Dwight; leave Pontiac 9 a.m. August 9, thirty-five miles to Bloomington via Chenoa; leave Bloomington 2 p.m., fifty-nine miles to Springfield via Lincoln; leave Springfield 8 a.m., August 10, forty-two miles to Litchfield via Thomasville; leave Litchfield 1 p.m. forty-nine miles to East St. Louis via Edwardsville. These distances are given in railroad mileage, and it is expected the road map when completed will show 10 or 15 per cent. increase.

About sixty-five signatures have been secured to a call for a meeting of automobile owners, and others interested, to be held at an early date, for the purpose of forming a club in Binghamton, N. Y. The promoters propose starting on a small scale, but later to arrange for club rooms and meetings to be held regularly during the summer.

The Buffalo Automobile Club will try to secure the entries of several prominent European drivers in the automobile tournament to be held in that city next summer, and will join other promoters in bringing the best talent from abroad for competition during the season. Many prominent Americans have already signified their willingness to compete.

The annual hill-climbing contest of the New York Motorcycle Club will be held on Memorial Day. A committee is now examining various hills in the vicinity with a view to selecting a grade for the event.

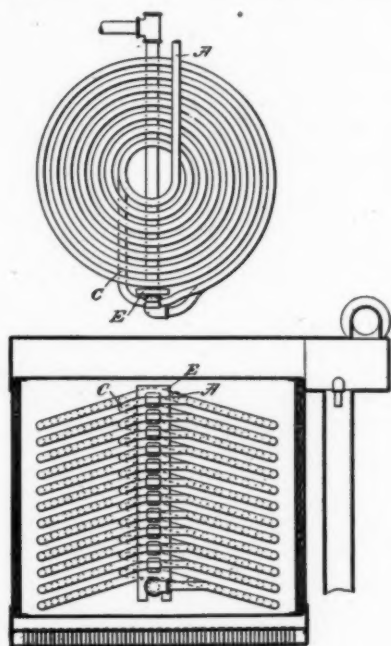


## Patents

### Flash Boiler.

No. 755,202.—G. E. Whitney, of Bridgeport, Conn.

In this boiler the water is fed to the top coils, as in the well-known White, and converted into steam about midway of its travel downward from coil to coil. The special feature of this boiler is the means used to prevent the water from running down into the lower coils and displacing the steam. Instead of bending the outer end of each coil up over the top of the boiler before connecting it to the inner end of the next, the connection is made direct and as short as possible. Each coil, however, is bent downward on each side of a



WHITNEY FLASH BOILER.

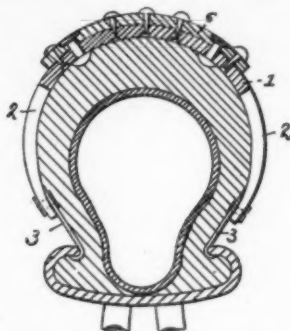
diametrical line, like a pair of inverted butterfly wings; and, as the steam pressure balances the water at the point of "flashing," the water on one side cannot flow over to the other side.

### Gasoline Mowing Machine.

No. 752,779.—Edward A. Johnston, of Chicago, Ill., assignor to the McCormick Harvesting Machine Co., Chicago. An automatic mowing machine which closely follows the design of the horse-drawn mower.

The machine is driven and the cutting mechanism actuated by an explosion motor, *a'*, mounted vertically on a platform on the main frame. The gear box, *d*, is mounted in the usual position at the rear of the frame. Hounds, *h*, are extended from the main frame forward a considerable distance beyond the inner shoe, *i*, to provide a bearing for the steering wheel *k*, the functions of steering and balancing being performed by the hounds and the

steering wheel. The position of the steering wheel at the right of the machine permits it to travel in the track cleared by the



NIORE TIRE PROTECTOR.

swath-board on the previous round, instead of on the loose cut crop as heretofore in machines of this type.

Cooling water, gasoline and the igniting batteries are carried in a box mounted on the hounds at the right of the machine. The driver's seat is placed back of the engine, midway between the two drivewheels giving the operator an unobstructed view of the course. The cutting apparatus is connected to the frame in the usual way by means of bars, *rs*, which are pivoted thereto of which *s* is the principal or coupling bar and *r* the rearwardly-extending thrust-bar.

The motor, *a'*, is so disposed that its shaft, *b'*, lies parallel with the main axle. On its stubble end the engine shaft has a sprocket, *d'*, and on the opposite end the usual flywheel, which is accommodated by a suitable opening in the main frame of the machine. The countershaft, *e'*, carries on its outer end a pinion, *f'*, between which and the traction wheels is interposed the usual compensating gear. The countershaft receives its drive through a chain from the sprocket on the engine shaft to a sprocket near the inner end of the countershaft.

The reverse is obtained through the medium of a pair of bevel gears, loosely mounted on the countershaft and having interposed between them an intermediate pinion providing for their constant rotation in opposite directions. Suitable friction clutches, actuated by the lever, *o'*, are

versing gear is keyed to a shaft which lies in the longitudinal plane of the machine and actuates at its forward end, through a clutch housed in the casing, *u*, the cutting mechanism which may be of the usual accepted type.

### Tire Protector.

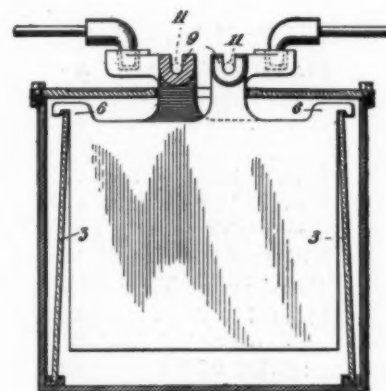
No. 755,310.—L. Niore, of Chateau-Renault, France.

A protector comprising a strip of tanned leather *1*, cut with suitable ears *2*, to which are riveted the metal hooks *3* which engage the edges of the rims. Over the strip *1* is riveted a leather tread *6*, the rivet heads projecting to diminish skidding.

### Storage Battery Construction.

No. 755,142.—S. Lake, of Bridgeport, Conn.

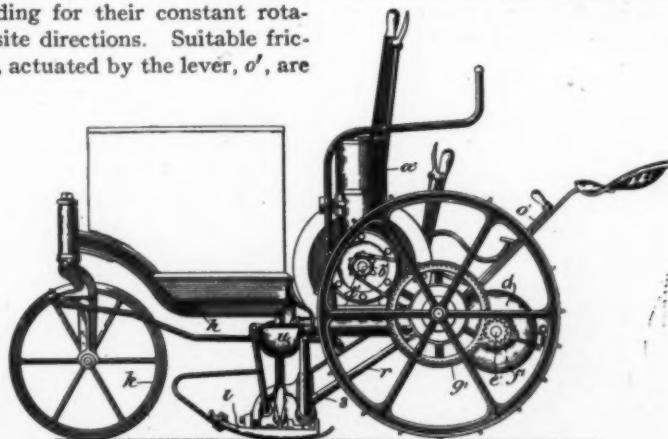
A battery in which the positive and negative plate lugs respectively are formed with cast heads *9, 9*, between which are placed spacing blocks, and the whole either



LAKE STORAGE BATTERY.

squeezed permanently together by long bolts *11*, covered with lead, or soldered together while squeezed, the bolts being then withdrawn. To facilitate spacing the plates thus without separators, they are supported by lugs *6* and glass plates *3*.

INDIANAPOLIS automobilists are suffering annoyance and small financial losses by the



MCCORMICK GASOLINE MOWING MACHINE.

provided to throw into or out of engagement either gear wheel with the countershaft. The intermediate pinion in the re-

thefts of lamps at night and the mischievous crippling of machines. Boys are supposed to be the guilty parties.



The Chicago agency for the Queen cars has been placed with H. O. Hayden.

The Pence Automobile Co., of Minneapolis has opened an agency at Butte, Mont.

The Chicago agency for the Royal Tourist has been placed with the Illinois Motor Car Co.

Arthur Bennett has been given the Chicago agency for the Mitchell cars, and will handle them in addition to the Premier autos.

An automobile school of instruction was opened by the Providence Y. M. C. A. on March 20, by a lecture given by Dr. W. E. Decker, of Boston.

The Hartford agency for the Rambler automobiles has been placed with L. H. Elmer, who has just held an opening show at his agency, 565 Main Street.

Edward L. Hugo, the Boston automobile broker, has opened offices at 36 Columbus Ave., that city, where machines of all makes will be bought and sold.

Ninety-three citizens of Savannah, Ga., have already complied with a new automobile ordinance requiring the registration and equipment of machines for identification.

S. A. Miners' automobile exhibition, recently held at his Allyn Street station, Hartford, was well attended. A two-cylinder Knox tourist, with canopy and glass front, was a feature of the show.

A. L. Cline & Co., who have just secured the agency in Washington, D. C., for the Baker line of electrics, have opened a garage at 1026 Connecticut Avenue, in the heart of the fashionable residence district of the capital. They also handle the Rambler gasoline cars.

The Waltham Manufacturing Company, of Waltham, Mass., is shipping a large number of its buckboards equipped with boxes for use as delivery wagons. The builders guarantee that 45 or 50 cents worth of gasoline will run one of these machines for 100 miles.

Since the first of the year the Studebaker Mfg. Co. has shipped from its New York house a motorette, and an electric stanhope to Merida, Yucatan. The buyer of the stanhope has since ordered a duplicate set of batteries, so that he will not lose the use of his vehicle while his battery is being recharged.

Trustee W. J. Hayes, of the bankrupt Conrad Motor Carriage Co. of Buffalo, has been ordered by Referee in Bankruptcy Hotchkiss to continue the business of the concern for eight weeks, and on June 1 to sell the plant and assets of the company. The trustee is doing considerable business at the plant but it is understood to be at a loss.

The Wayne gasoline cars will be represented in New England by W. H. Stimpson, at 12 Columbus Ave., Boston.

George M. Brown has just opened offices at 43 Columbus Ave., Boston, and will represent the Apperson Brothers and Haynes-Apperson Co. in New England.

L. J. Ollier, president of the National Retail Dealers' Automobile Association, states that a meeting will be held in Chicago in a few days when final arrangements will be made for incorporating that body.

The Kalamazoo Automobile Agency, composed of W. O. Harlow, of Kalamazoo, and W. S. Daniels, of Grand Rapids, will open for business at an early date, handling well-known cars and automobile sundries.

A garage is shortly to be installed at 642 South Broadway, Los Angeles, the name of which will be "The Auto Station." At the back of the enterprise are Z. David, C. H. Duncan and H. F. Phillips. The garage is to be under the management of W. E. Swalm.

During the month of March the E. J. Willis Co., 8 Park Place, New York, was obliged to double both its force and floor space on account of the increase of its business. The well-known Yankee Spark Plug and Auto-Clock are manufactured by this concern.

The first of the 1904 models have arrived in Nashville, Tenn., and the automobile season will undoubtedly open there with a rush in a few days. The new machines are Ramblers, shipped to the Southern Electric Co., which will handle Ramblers and Whites this year. In this shipment were six cars, three of which have already been sold.

The directors of the bankrupt Morlock Automobile Mfg. Co. of Buffalo have made a proposition to take over the assets now in the hands of the trustee and give the creditors 50 cents on the dollar, including the 10 per cent. already distributed. They also agree to pay \$400 for the expense of bankruptcy proceedings. Referee Hotchkiss has called a meeting for April 6 in Bankruptcy Court to consider the proposition.

The E. R. Thomas Motor Co., of Buffalo, is designing a six-cylinder, 50-horsepower motor, upon which active work will soon be commenced. Several of these cars will figure in all of the important events in this country, including the Ormond tournament next winter. The company is prepared to accept special orders for 24, 30 and 40 horsepower six-cylinder engine machines with the latest designs of limousine, Thomasine or Pullman bodies.

John B. Kelly, of Portland, Ore., is dealing in White touring cars exclusively and is doing an excellent business. These carriages have been shipped to Portland by the carload. A powerful steam car is found most effective in climbing the hills of Portland.

The American Mfg. Co., recently incorporated under the laws of the District of Columbia, with a capital stock of \$1,000,000, to manufacture automobiles for business and pleasure purposes, gasoline engines and motor boats, is looking for a site in Alexandria, Va., on which to locate its plant.

Among the Boston motorists who are planning tours this season in England, France and Germany, including attendance at the International Cup Race, are Charles J. Glidden and Mrs. Glidden, accompanied by Miss Martha Waldron and Charles W. Barron; Mr. and Mrs. Otto B. Cole, Mr. and Mrs. H. D. Corey and Mr. and Mrs. George H. Morrill, Jr.

The Chisholm & Phillips Automobilium Co. of Cleveland has made a proposition to lease the establishment heretofore occupied by the Cleveland Automobile & Supply Co., which has been in the hands of a receiver for some months and which was declared bankrupt a short time ago. The building was especially remodeled for garage purposes from the ruins of the old Music Hall on Vincent, at the rear of the Hollenden Hotel.

The first long run that has been made this year out of Buffalo was a trip to Fredonia made by Doctors Chauncey Rathbun and MacDonald Moore, who bought two Rambler touring cars at the Convention Hall show, and, accompanied by Fred Carter, of the D. H. Lewis Co., and Dr. Dodd of Fredonia and Mr. Conn of Dunkirk, drove to Fredonia in one day. The roads were full of snow and ice, which caused one or two slight mishaps. The worst roads were in the Reservation, between Angola and Silver Creek.

The Theodore Jonas Automobile Co., at 726 National Ave., Milwaukee, has decided to build an addition to its South Side plant in the near future, besides establishing a downtown garage which it is said will be used for the storage and repair of automobiles only. Mr. Jonas says there is a great demand in Milwaukee for a garage where there will be ample accommodation for machines coming into the city from various points in the State, and it is to meet it that the Jonas company will open the new garage. Just where it will be located has not yet been determined.



though it is said it will be central and in some commodious building already erected.

The Automobile Garage & Repair Co. of Cleveland has taken the Ohio agency for the line of tires, horns, spark plugs and other specialties imported and manufactured by Emil Grossman of New York. At the local show the company sold a dozen Autocars for which it has the agency, and since the show has been delivering them at the rate of one a day.

Frank R. Blackmore and Edward L. Striebingen of Cleveland have formed a partnership and taken a lease on a large building at 472 and 474 East Prospect Street, in that city, which will be remodeled into a fine garage. The building is in the East End on the route usually taken by automobilists to the park and boulevard system.

The Manhattan Storage Co. of New York, has taken a ten-years' lease on the modern garage building at 334 to 340 West 40th Street, New York City, and will occupy the new quarters after April 1. The building is especially adapted for garage purposes, and affords the company opportunity to place about 200 cars on display on the main floor at one time. The company will continue to handle second-hand vehicles and the Toledo steamers, but on a larger scale than formerly.

Ralph Owen, Cleveland agent for the Oldsmobile and for the Matthews Boat Co., of Bascomb, O., is having a special motor launch built for himself and C. W. Schmidt, Jr. Her dimensions will be approximately as follows: Length over all, 60 feet; waterline, 55 feet; beam, 6 feet; draft, 2 1-2 feet. Her bow will be very high and sharp and she will taper aft to an edge. She will have a three cylinder engine of the four-cycle type guaranteed to develop 38 horsepower. The finish and furnishings will be elaborate.

There has been such a demand for wood mudguards this season that the American Veneer Co., of New Orange, N. J., has been obliged to greatly increase its capacity for work in this particular line. The company is able to get out 150 sets each day. The orders for dashboards and laminated wood automobile bodies have been unusually large. The increasing popularity of automobile bodies made of laminated wood is due to the fact that this construction embodies two of the most desirable features for this class of work, lightness and strength.

Contracts have been made recently with the makers of a number of well-known cars to use Rushmore lens mirror searchlights, and the Cadillac Company of New York and the Standard Automobile Co. will equip all of their Cadillac and Decauville cars with these searchlights and generators, offering the buyer of the car a two weeks' trial of them with option of buying them or returning them at the end of that time.

## Current News from New York.

Word comes from Pittsfield, Mass., that Alden Sampson, 2d, will be unable to finish his racing car in time for the elimination trials, and in consequence he has had to cancel his entry for the international cup race. Failure to get material is given as the reason. The Peerless and the Peter Cooper Hewitt cars will have to be ready for the inspection committee of the Automobile Club by April 16. It is possible that an extra Peerless machine will be selected to complete the team. Cecil Taylor, who was formerly connected with the Gobron-Brillie interests, was scheduled to drive the Sampson racer and will probably handle it when it is ready for racing later in the season.

F. Von Brandenstein, secretary of the German Automobile Club, has sent to the Automobile Club of America a list of prices that will be charged at German hotels during the international cup race in June, and he states that an effort will be made to keep prices in conformity with the list sent.

Prices are given according to the number of flights of stairs that the guest must ascend in order to get to bed. A mark is about twenty-four cents, and the following schedule states the price in marks per week:

One room with one bed, up one flight, 30 marks.

One room with one bed, up two flights, 25 marks.

One room with one bed, up three flights, 20 marks.

One room with one bed, up four flights, 20 marks.

One room with two beds, up one flight, 45 marks.

One room with two beds, up two flights, 40 marks.

One room with two beds, up three flights, 35 marks.

In private houses and cottages the prices of the rooms range from 7 to 20 marks.

The New Jersey Automobile and Motor Club is preparing plans for an automobile parade to be held early in May. It is proposed to run through the Oranges, Elizabeth, Montclair, Glen Ridge, Bloomfield and Newark. Every owner of an automobile in the State will be invited to take part, and other clubs will be asked to participate. The N. J. A. and M. C. expects to turn out 140 machines or more.

William K. Vanderbilt, Jr., has ordered Tiffany to prepare a design for the trophy which he will offer for a 300-mile road race, which would indicate that he believes the contest will be held. According to Chairman Pardington, the race will take place after the international cup race which is to be run in Germany on June 17.

One road driver in New York City has become so incensed at the work of irresponsible chauffeurs that he threatens to buy a policeman's whistle and blow it strenuously every time he sees a power-driven machine going faster than eight miles an hour. He declares his belief in the automobile and its future, but declares hanging is too good for those lawbreaking motorists who have no respect for others on the public highway.

Police Commissioner William McAdoo, in accordance with the request made by the Automobile Club of America, has taken up the matter of the arrests made in Central Park, and the statement that the police allowed class distinction to enter in the discharge of their duty, and has found against the motorists.

The Commissioner says that he couldn't interfere with the manner in which the police are now enforcing the laws, for he does not believe the men are making any distinction between chauffeurs and owners, as has been claimed, or between automobilists and horsemen.

"I believe the policemen when they deny the charge of discrimination," said the Commissioner. "The owners are extremely sensitive because when arrested they are locked up if unable to get bail promptly, and clergymen and prominent citizens have written me asking if such prisoners cannot be released on nominal bail. I have told both sides that I cannot differentiate one class of citizens from another, and I have urged on the police that everybody is equal before the law. I don't want an ashcart driver arrested because he is poor and friendless or a rich automobile owner arrested because he has a lot of money.

"Then there are those who want a more rigorous enforcement of the laws. They complain particularly of the way automobiles are operated on Seventh and Eighth Avenues, Riverside Drive and in Central Park and its tributary ways. I must declare myself in favor of a strict enforcement of the laws against over-speeding, especially in the congested districts."

Tuesday night at the Automobile Club of America was taken up with a discussion on automobile legislation with particular reference to the Hill bill, which on that day passed the Senate at Albany and which will undoubtedly be the new law of the State. An epitome of the new measure is given elsewhere.

President Scarritt wished to give full credit to the New York State Automobile Association, Judge Hotchkiss, A. R. Shattuck and W. W. Niles for the work in behalf of the bill.

Insurance policies covering loss of fire, originating in the automobile itself, are now offered by an insurance broker in

New York. The risks are taken by the Boston Insurance Company, which is the first one to include that clause in policies on power-driven machines. The company also issues liability policies at rates according to the horsepower of the machine.

To build one of the finest automobile homes in America is the intention of the Pope Manufacturing Company, which has leased a plot of ground on the northeast corner of Broadway and Fifty-fifth Street, where a new building will be erected. The Broadway side will be two stories, entirely of glass, which will give an excellent display of the Pope-Toledo, the Pope-Waverley and other products of the company.

The American Darracq Automobile Company has issued a leaflet containing copies of letters written by Adam Opel of Russelheim, Germany, and addressed to S. De Feher, Belmont Auto Station, Philadelphia, in which Herr Opel repudiates any business connection with Mr. De Feher and announces that the latter is not authorized to use the title of "Opel-Darracq's agent." The leaflet also contains a copy of a letter written by A. Darracq & Co. of Suresnes, France, builders of the Darracq car, stating that the American Darracq Automobile Company "are the only authorized and sole agents" of the Darracq cars in America.

Sometime in April, F. E. Moscovics will start on a tour to St. Louis in a Clement-Bayard car, in the interest of the Sydney B. Bowman Automobile Company, and the Continental Caoutchouc Company, which imports the tires with which the car is fitted. No record-breaking will be attempted, but simply a tour with stops at various places along the route for placing agents and making individual sales.

The Moore, Munger Co., which was incorporated last week, has leased the building 602 West Fifty-second Street, New York, and will do general automobile assembling and body work. The firm will design and build both wood and aluminum bodies. The firm consists of Geo. W. Moore and L. D. Munger. The latter is well known in the automobile trade, having been identified with the industry for many years.

On Sunday the Long Island Automobile Club enjoyed a run to Westbury, L. I., going by way of Woodhaven, Jamaica, Hyde Park and Minneola, and returning by way of Flushing.

The board of governors of the Automobile Club of America has passed a resolution favoring the use by the city of New York of bituminous macadam pavement, which is said to be less slippery in wet weather than asphalt and of a substance that gives a good surface for automobiles in particular and driving in general.

A bill has been introduced in Albany giving authority to the city to accept a patented article such as the macadam, and an effort is being made by the West Side Association to have the first stretch

of pavement laid on Seventy-second Street, from Central Park to Riverside Drive.

Classon Point Inn has opened as a suburban resort for automobile drivers. Joseph Cowan, an enthusiastic automobilist, is in charge. The place is conveniently located in Westchester.

E. E. Britton, of the Automobile Club of America, has applied for a "G. B." sign for his car. He goes abroad next month and will attend the international cup race in Germany.

Joseph Tracy, with the last year's cup-racing Peerless, has been trying the roads on Long Island, probably with a view of helping the A. A. A. officials to select a course for the Vanderbilt cup race. The racer is running fast and steady.

Increasing sales marked the past week in New York trade circles, the result of more settled weather. The dealers are now trying to get a supply of cars for the rush, which is confidently expected within the next few weeks. There are buyers galore, ready to enter the game just as soon as the weather is conducive to outdoor enjoyment.

The managers of the Wendle estate, which owns most of the property where the garages are located on Thirty-seventh and Thirty-eighth Street, have had plans drawn for a new building to be erected on Broadway and Sixty-first Street, to be used as a garage.

As the result of Mr. Hollander's trip abroad, the American agents for the F. I. A. T. cars, Hollander & Tangeman, have received an extra shipment of the Italian machines. Among the recent buyers of the F. I. A. T. is Joseph Huber, the brewer, who will have a car finished in blue.

Crestmobiles will be represented in this city by Charles P. Walker and Andrew C. Dan, under the firm name of Walker and Dan, who have opened a garage at 20 West Sixtieth Street. A general storage business will be conducted. The 1904 Crest is an 8-horsepower car, with an air-cooled motor, that sells at \$900.

The American Automobile Storage Company has received a new 24-horsepower Franklin car which is said to be the largest air-cooled touring car in the world. It seats three in the tonneau and two in the front seat, and sells at \$3,000.

De Dietrich cars will be represented in this country after this week by the American De Dietrich Company, which will open a new salesroom, garage and repair shop at No. 1 West Thirty-fourth Street.

Peter Fogarty, a former member of the New York Garage Company, now dissolved, will represent the Northern car in this city, and is fitting up a well-appointed garage for them at 142 West Thirty-eighth Street.

George B. Adams, who handles the Apperson car in New York, will open a new

salesroom at 20 West Sixtieth Street within the next few days.

On his return from Washington, Monday, F. A. La Roche, of the American Darracq Co., announced that he had bought the lease of the two buildings at 317, 319 North Broad Street, Philadelphia, and intended opening one of the finest garages for foreign cars in the city. The buildings have a frontage of 46 feet, are four stories high and have a depth of 116 feet. Mr. La Roche will inaugurate several new ideas in the management of the establishment for the purpose of protecting the interests of the owners of cars. A complete repair shop filled with machine tools will be one of the features of the place.

#### PACIFIC COAST NEWS NOTES.

##### *Special Correspondence.*

SAN FRANCISCO, March 22.—The George N. Pierce Company reports having sold through its branch at Fresno, Cal., twenty-one stanhopes from July, 1903, to January, 1904, and eighteen stanhopes to date this year. Fresno is exceedingly dusty during the greater part of the year, so that the stanhope has proved a highly serviceable car. It has no chain; its engine and connections are enclosed and impervious to dust, sand or mud. Most of the physicians in that region who use automobiles own stanhopes.

George A. Turner, a real estate agent of this city, uses a Rambler touring car to convey customers from his office out to the tracts he has for sale in the Sutro Heights district. Rambler touring cars have been delivered to J. A. Madary of Fresno, J. D. Peters of Merced, and A. F. Patnott of Hanford. They were conveyed to Stockton by San Joaquin river boat and proceeded under their own power to their destinations. The Rambler agent, F. A. Jacobs, recently received a carload of 16-horsepower touring cars, 1904 model, and two more carloads are on their way from the East. J. E. Beard of Napa is Rambler agent for Napa and Solano counties, Cal.

Two of the principal stockholders of the National Automobile Company of San Francisco having disagreed, A. C. Kains has been appointed assignee and has taken control of the business.

A carload of machines was shipped by the Santa Fe railroad last month by the Ford Motor Co. to the Holle Auto. Mfg. Co., of 1814 Market Street, San Francisco. Joseph Holle, during a recent visit to the East, secured the agency for the Ford machines, of which this is the first installment to be received by the San Francisco agent.

The Mobile Carriage Co. has adopted the following schedule of garage charges: Storing large touring cars, \$20 per month; lighter touring cars, \$18 per month; Cadillacs and Ramblers, \$15 per month; runabouts, \$13. These rates include cleaning, lubricating oil, acetylene, kerosene for side lamps, and delivery of cars.



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